MEDICAL UNIVERSITY OF WARSAW

FACULTY OF MEDICINE

Medical University of Warsaw
Faculty of Medicine - English Division
61 Żwirki i Wigury Street
02-091 Warsaw, Poland

http: // www.wum.edu.pl/

3rd YEAR CURRICULUM

6-year program

Academic year: 2025/2026

AUTHORITIES OF MEDICAL UNIVERSITY OF WARSAW – TERM 2024-2028

Rector – Professor Rafał Krenke MD, PhD

Vice Rector for Student Affairs and Education – Professor Marek Kuch, MD, PhD

Vice Rector for Science and Technology Transfer – Professor Marcin Sobczak, MD, PhD

Vice Rector for Human Resources – Professor Dorota Olczak-Kowalczyk, MD, PhD

Vice Rector for Clinical Affairs and Investments – Professor Agnieszka Cudnoch-Jędrzejewska, MD, PhD

Vice Rector for International Relations, Development and Promotion – Professor Michał Grąt, MD, PhD

FACULTY AUTHORITIES OF MEDICAL UNIVERSITY OF WARSAW – TERM: 2024-2028

Faculty of Medicine – Professor Paweł Włodarski MD, PhD

English Division – Faculty of Medicine – Assoc. Prof. Jacek Sieńko, MD, PhD.

DEAN'S OFFICE

Head of the Dean's Office – Krystyna Jarząb, MA

Student Administration Officer (1st, 2nd, 3rd - Year) – Aleksandra Chilecka

Student Administration Officer (4th, 5th, 6th - Year) – Dominka Renik, MA and Patrycja Karpińska, MA

STUDENT GOVERNMENT REPRESENTATIVES:

President – Alexis Vourtsis

Vice President, Head of Academic Affairs – Alexander Steiner

Vice President, Head of Student Affairs – Sylvie Marie Régine Etienne

Head of Communications and Administrative Management – Maria Kienitz

Social Media Coordinator –

Events Coordinator – Dyia Bachour

Events Coordinator – Divit Amarnani

www: *https://ed.wum.edu.pl/edsq*
https://edsqmuw.wixsite.com/wumedsq

CLASS REPRESENTATIVE:

Haroon Tahir – 3 year

SCHEDULE – ACADEMIC YEAR 2025/2026

6-year program

WINTER SEMESTER – 01.10.2025 – 15.02.2026

STUDENT'S ACADEMIC CLASSES:	01.10.2025 – 21.12.2025
	05.01.2026 – 25.01.2026
WINTER HOLIDAYS:	22.12.2025 – 04.01.2026
EXAM SESSION:	**26.01.2026 – 01.02.2026**
DAYS OFF BETWEEN SEMESTER:	02.02.2026 – 08.02.2026
RETAKE EXAM SESSION:	09.02.2026 – 15.02.2026

SUMMER SEMESTER – 16.02.2026 – 30.09.2026

STUDENT'S ACADEMIC CLASSES:	16.02.2026 – 01.04.2026
	09.04.2026 – 26.04.2026
	04.05.2026 – 14.06.2026
EASTER HOLIDAYS:	02.04.2026 – 08.04.2026
SPRING HOLIDAYS:	27.04.2026 – 03.05.2026
DAYS OFF BEFORE EXAM SESSION:	15.06.2026 – 21.06.2026
EXAM SESSION:	**22.06.2026 – 12.07.2026**
SUMMER HOLIDAYS:	13.07.2026 – 30.09.2026
RETAKE EXAM SESSION:	31.08.2026 – 13.09.2026

Curriculum of the 3rd year of 6-year 2025/2026 ED program and the list of contents

3rd year

page	subject	form of credit	semester	Total no of hours	including				ECTS
					lecture	seminar	class	practical	
5	Genetics	exam	2	30	2	11	17		2
11	Microbiology	exam	1&2	80		10	70		6
18	Parasitology	exam	1	35		10	25		2
23	Pathomorphology	exam	1&2	160	40	20	100		17
27	Laboratory Diagnostics	exam	2	45	5	25	15		2
32	Radiology	exam	1	72	10	15	47		4
36	Polish for Medicine-Communication Skills In Medicine	exam	1&2	60			60		3
42	Oncogenetics	credit	2	13		10	3		1
47	Introduction to Internal Medicine	credit	1&2	100	10	20	70		5
52	Medical Psychology	credit	1	20		10	10		1
57	Medical Communication	credit	1	10			10		1
62	Pharmacology and Toxicology	credit	1&2	100	30	10	60		9
68	Introduction to Pediatrics	credit	1&2	60		20	40		4
75	Nuclear Medicine	credit	1	30		7	23		2
80	Propedeutics of Stomatology	credit	2	18	18				1
85	Vocational training - Internal medicine	credit	2	140				140	4
-	Optional course	credit	1&2	60		60			4
				1033	115	228	550	140	68

GENETICS - CLINICAL

1. IMPRINT	
Academic Year	2025/2026
Department	Faculty of Medicine
Field of study	Medicine
Main scientific discipline	Medical sciences
Study Profile	General academic
Level of studies	Uniform MSc
Form of studies	Full time studies
Type of module / course	Obligatory
Form of verification of learning outcomes	Exam
Educational Unit / Educational Units	Department of Medical Genetics Center for Biostructure Research, First Faculty of Medicine ul. Pawińskiego 3c, 02-106 Warszawa phone: +48 22 572 06 95, fax: +48 22 572 06 96 http://www.genetyka.wum.edu.pl e-mail: krzysztof.szczaluba@wum.edu.pl
Head of Educational Unit / Heads of Educational Units	Head of the Department: Rafał Płoski MD PhD
Course coordinator	Krzysztof Szczaluba MD PhD e-mail: krzysztof.szczaluba@wum.edu.pl tel. 22 572 06 95

Person responsible for syllabus	Krzysztof Szczaluba MD PhD e-mail: krzysztof.szczaluba@wum.edu.pl tel. 22 572 06 95
Teachers	Rafał Płoski MD PhD Andrzej Kochański MD PhD Krzysztof Szczałuba MD PhD Jennifer Castaneda MD PhD Katarzyna Kuśmierska PhD Snir Boniel MD

2. BASIC INFORMATION

Year and semester of studies	3rd Year and 5th Semester	**Number of ECTS credits**	2.00

FORMS OF CLASSES **Contacting hours with academic teacher**	**Number of hours**	**ECTS credits calculation**
Lecture (L)	2	0.08
Seminar (S)	11	0.44
Classes (C)	17 (live, contact classes:17)	0.68
e-learning (e-L)	-	-
Practical classes (PC)	-	-
Work placement (WP)	-	-
Unassisted student's work		
Preparation for classes and completions	20	0.8

3. COURSE OBJECTIVES

O1	– knowledge of causes, symptoms, principles of diagnosis and therapeutic management within the scope of the most frequent genetic disorders in the population; – basic information in genetics, such as modes of inheritance and classification of genetic disorders,
O2	- application of diagnostic tests – understanding cytogenetic and molecular tests results; – skills to communicate genetic information to patients and their families.
O3	- ability to verify indications for pre- and postnatal diagnostics; – ability to make a decision on the necessity of performing genetic tests and choosing appropriate tests; - ability to gather and analyze medical genetic history and draw pedigrees,

4. **STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING** *(concerns fields of study regulated by the Regulation of Minister of Science and Higher Education from 26 of July 2019; does not apply to other fields of study)*	
Code and number of effect of learning in accordance with standards of learning	**Effects in time** *(in accordance with appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019)*
Knowledge – Graduate* knows and understands:	
C.W3	normal human karyotype and rules of sex determination
C.W7	chromosomal aberrations as causes of human disease
C.W9	basic rules of genetic and chromosomal mutation diagnosis
C.W42	basic directions of therapy development, in particular the possibility of cell therapy and gene therapy in specific diseases
E.W3 10	causes, symptoms, principles of diagnosis and therapeutic treatment of the most common genetic syndromes in children
E.W5	basic methods of diagnosing and treating the fetus
E.W37	causes, symptoms, the rules of diagnosis and treatment of the most frequent inherited diseases
Skills– Graduate* is able to:	
C.U2	identify indications for prenatal testing
C.U3	make informed decisions about necessity to perform cytogenetic and molecular testing
D.U5	conduct an interview with an adult patient, a child and the family with empathy and listening actively; is able to discuss the patient's life situation
D.U6	inform a patient of the purpose, course and any risk of proposed diagnostic or treatment actions and obtain informed consent from the patient
D.U8	pass bad news to a patient and his/her family
E.U16	plan diagnostic, therapeutic and preventive treatment

** In appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019 „graduate", not student is mentioned.*

5. **ADDITIONAL EFFECTS OF LEARNING** *(non-compulsory)*	
Number of effect of learning	**Effects of learning in time**
Knowledge – Graduate knows and understands:	

Skills– Graduate is able to:	
Social Competencies – Graduate is ready for:	
K1-K8	establishing and maintaining a deep and respectful contact with the patient, as well as showing understanding for worldview and cultural differences be guided by the good of the patient observance of medical confidentiality and patient's rights taking actions towards the patient based on ethical principles, with the awareness of social conditions and limitations resulting from the disease perceiving and recognizing own limitations and self-assessment of deficits and educational needs promoting pro-health behavior use of objective sources of information formulating conclusions from own measurements or observations

6. CLASSES

Form of class	Class contents	Effects of Learning
Lecture 1	'Clinical evaluation, organization of care and therapeutic management of genetic disorders.' The lecture contains examples of more common genetic disorders along with the methods of their clinical diagnosis, both in the pre- and postnatal aspect. The second part shortly describes therapeutic management of genetic conditions as well as organization of care in patients with rare disorders.	C.W9 E.W310) E.W5 E.W37 C.U2 C.U3 E.U16
Lecture 2	'Diagnostics and discovery of new genetic diseases in the age of next generation sequencing (NGS)' The lecture presents the diagnostic possibilities of the exome sequencing (WES) technique on specific examples of new genetic disorders.	C.W9 C.U3
Seminars and Practice	Reproductive genetics with elements of prenatal diagnosis Personalized pediatrics Microcephaly Neurometabolism and Metabolic disorders Familial hypercholesterolaemia Monogenic diabetes Genetic disorders with dysmorphism Clinical cytogenetics Neurogenetics Gene therapies	C.W3 C.W7 C.W9 C.W42 E.W3 10) E.W5 E.W37 C.U2 C.U3 D.U5 D.U6 D.U8 E.U16
Practice Classes	PC1 Cytogenetics and dysmorphology PC2. Tasks - clinical cases in pediatrics and prenatal diagnosis PC3. Quiz - questions and answers (the most common genetically conditioned diseases and methods of their diagnosis and therapy) PC4. Neurogenetics and Gene Therapies All live classes in the room (contact exercises)	C.W7 C.W9 C.W42 E.W310) E.W37 E.W5 C.U2 C.U3 E.U16 D.U5

		D.U6 D.U8 K1-K8
Additional materials	List of 28 genetic syndromes	E.W310) E.W37

7. LITERATURE

Obligatory

Medical Genetics
Jorde, Carey, Bamshad
4th Edition
Elsevier

Supplementary

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8. VERIFYING THE EFFECT OF LEARNING

Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion
C.W3, C.W7, C.W9, C.W42, E.W3 10), E.W5, E.W37 and from 2nd yr syllabus: C.W1, C.W2, C.W4-6, C.W8 i B.W13, B.W14	Exam (test)	Answering correctly to more than 50% of questions
	Participation in live tasks	Verification of student's presence and activities
C.U2, C.U3, D.U5, D.U6, D.U8, E.U16	Oral report on performed tasks	Correctly performed tasks
K1-K8	Observation of student's behavior and interactions	Command of social competencies

9. ADDITIONAL INFORMATION *(information essential for the course instructor that are not included in the other part of the course syllabus e.g. if the course is related to scientific research, detailed description of, information about the Science Club)*

Students are obliged to attend a lecture, as well as all seminars and classes. No absence is accepted during classes. An absence on classes and seminars will have to be covered with another group. Change of groups is possible only as an exchange with a person from another group. Being late for over 15 minutes counts as an absence.

Person responsible for students affairs: Krzysztof Szczałuba, MD, PhD krzysztof.szczaluba@wum.edu.pl

Evaluation criteria

Form of passing the course: exam (test). The exam evaluates the abilities and knowledge gained during the Genetics course during the fourth and sixth semesters of the studies (2nd and 3rd years).

Grade	Criteria

2,0	Not getting over 50% of points
3,0	Getting at least 51% of points
3,5	Getting at least 61% of points
4,0 (good)	Getting at least 71% of points
4,5 (above good)	Getting at least 81% of points
5,0 (very good)	Getting at least 91% of points

ATTENTION

The final 10 minutes of the last class in the block/semester/year should be allocated to students' Survey of Evaluation of Classes and Academic Teachers.

Microbiology

1. IMPRINT	
Academic Year	2025/2026
Department	Faculty of Medicine
Field of study	Medicine
Main scientific discipline	Medical sciences
Study Profile	General academic
Level of studies	Uniform MSc
Form of studies	Full-time studies
Type of module / course	Obligatory
Form of verification of learning outcomes	Exam
Educational Unit / Educational Units	Chair and Department of Medical Microbiology 5 Chałubińskiego Street 02-004 Warsaw, Poland (+48 22) 628 27 39 http://mikrobiologia.wum.edu.pl e-mail: mikrobiologia@wum.edu.pl
Head of Educational Unit / Heads of Educational Units	prof. dr hab. Hanna Pituch (e-mail: hanna.pituch@wum.edu.pl)
Course coordinator	dr n. med. Robert Kuthan, e-mail: robert.kuthan@wum.edu.pl
Person responsible for syllabus	dr n. med. Robert Kuthan, e-mail: robert.kuthan@wum.edu.pl
Teachers	dr n. med. Robert Kuthan lek. Gabriel Zaremba-Wróblewski dr hab. n. med. Anna Henriques dos Santos de Sepulveda mgr. biol. Kinga Markowska

2. BASIC INFORMATION

Year and semester of studies	III year, V and VI semester (winter and summer)	**Number of ECTS credits**	6.00

FORMS OF CLASSES	**Number of hours**	**ECTS credits calculation**
Contacting hours with academic teacher		
Lecture (L)		
Seminar (S)	10	0.40
Classes (C)	70	2.80
e-learning (e-L)		
Practical classes (PC)		
Work placement (WP)		
Unassisted student's work		
Preparation for classes and completions	70	2.80

3. COURSE OBJECTIVES

O1	The student will acquire knowledge about the pathogenicity of bacteria, viruses, and fungi, as well as the epidemiology of infections, and the importance of a healthy human microbiota.
O2	The student will become familiar with diagnostic methods used to identify infections and infectious diseases, diagnostic algorithms, the limitations of tests, potential causes of pre-laboratory errors, and methods for determining antimicrobial susceptibility.
O3	The student will learn the principles of antimicrobial therapy, the mechanisms of resistance to anti-infective drugs, and strategies for preventing infections.
O4	The student will gain the ability to plan diagnostic procedures and independently interpret microbiological test results, as well as be prepared to select appropriate antimicrobial therapy.
O5	The student will acquire skills in performing basic laboratory procedures, operating measuring instruments, and evaluating the accuracy of measurements.
O6	The student will develop social competences in line with microbiology learning outcomes, and will be prepared to use objective sources of information and plan further education to keep knowledge up to date.

4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING

Code and number of the effect of learning in accordance with standards of learning	**Effects in the field of:** *(in accordance with appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019)*
Knowledge – Graduate* knows and understands:	

C.W11.	genetic mechanisms of drug resistance developed by microorganisms and cancer cells;
C.W12.	microorganisms, focusing on pathogenic microorganisms and microorganisms present in the human microbiome;
C.W13.	epidemiological background of viral, bacterial, fungal, and parasitological infections, including the geographical distribution of microorganisms;
C.W14.	influence of abiotic and biotic environmental factors (viruses and bacteria) on the human body and the population of people, and the ways of their penetration into the human body;
C.W15.	consequences of exposure of the human body to a variety of chemical and biological agents and the principles of prevention;
C.W16.	infective for humans forms or developmental stages of selected parasitic fungi, protozoa, helminths, and arthropods, including the geographical distribution of microorganisms;
C.W18.	symptoms of iatrogenesis, the ways of its distribution, and pathogens causing changes in particular organs;
C.W19.	basics of microbiological and parasitological diagnostics;
C.W20.	basics of disinfection, sterilization, and aseptic procedure;
C.W33.	external and internal pathogens, modifiable and non-modifiable;
C.W40.	problem of drug resistance and multi-drug resistance;
Skills– Graduate* is able to:	
C.U6.	assess environmental threats and use the basic methods to detect the presence of harmful factors (biological and chemical) in biosphere;
C.U9.	prepare preparations and recognize microscopic slides of certain pathogens;
C.U10.	interpret the results of microbiological tests;
C.U15.	design the schemes of reasonable chemotherapy of infections, empirical and targeted;
B.U9.	use the basic measurement equipment and assess the precision of the measurements;
D.U17.	D.U17. critically analyse the medical bibliography (also in English) and draw conclusions;

** In appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019 „graduate", not student is mentioned.*

5. ADDITIONAL EFFECTS OF LEARNING *(non-compulsory)*	
Number of effect of learning	**Effects in the fields of:**
Knowledge – Graduate knows and understands:	
Skills– Graduate is able to:	

Social Competencies – Graduate is ready for:	
SC1	The graduate is aware of his own limitations and skills.
SC2	The graduate is able to use objective sources of information;

6. CLASSES

Form of class		Class contents	Effects of Learning
Classes Module I		1. Pathogenic properties of microorganisms. Basics of diagnostics of bacterial infections. The microbiota and its role in human health.	C.W19, C.W12, C.U6, C.U9.
		2. Hospital hygiene. Sterilization and disinfection. Methods of controlling the purity of air, surfaces, and water.	C.W20, C.U6.
		3. Gram-positive and Gram-negative cocci.	C.W12, C.W13, C.W14, C.W15, C.W19, C.W33, C.U9, B.U9.
		4. Gram–negative bacilli.	C.W12, C.W13, C.W14, C.W15, C.W19, C.W33, C.U9, B.U9.
		5. Mycobacteria and other Gram-positive rods and aerobic spore-forming bacilli.	C.W12, C.W13, C.W14, C.W15, C.W19, C.W33, C.W40, C.U9, B.U9.
		6. Bacteria growing anaerobically.	C.W12, C.W13, C.W14, C.W15, C.W19, C.W33, C.U9, B.U9.
		7. Chlamydia, mycoplasma, rickettsia, spirochetes.	C.W13, C.W14, C.W19, C.U6, C.U10
		8. Pathogenic fungi. Mycotoxins and mycoallergens. Antifungal drugs.	C.W12, C.W13, C.W16, C.W19, C.U9, B.U9.
Classes Module II		9. Antimicrobial treatment. Antibiotics and chemotherapeutics. Principles of rational antibiotic therapy. Bacterial resistance to antibiotics. Susceptibility testing methods.	C.W11, C.W40, C.U15, B.U9.
		10. Viruses, general characteristics and methods of identifying infections, antiviral drugs.	C.W11, C.W13, C.W14, C.W15, C.W19, B.U9, D.U17.
		11. DNA viruses.	C.W13, C.W14, C.W15, C.W18, C.U6, D.U17.
		12. RNA viruses.	C.W13, C.W14, C.W15, C.W18, C.U6, D.U17.
Module III	Classes	13. Respiratory tract infections.	C.W18, C.W19, C.U6, C.U10, C.U15, B.U9, K1
		14. Infections of the skin, wounds, bones, and joints.	C.W18, C.W19, C.U6, C.U9, C.U10, C.U15, B.U9, K1
		15. Urinary tract infections.	C.W18, C.W19, C.U6, C.U9, C.U10, C.U15, B.U9, K1
		16. Gastrointestinal tract infections.	C.W18, C.W19, C.U6, C.U9, C.U10, C.U15, B.U9, K1
		17. Infections of the nervous system. Prion diseases.	C.W18, C.W19, C.U6, C.U9, C.U10, C.U15, B.U9, K1
	Seminars	1. Cardiovascular infections. Zoonotic infections. Bioterrorism.	C.W14, C.W15, C.U17C.W18, C.W19, C.U6, C.U10, B.U9, K1

		2. Sexually transmitted microorganisms. Vertical and perinatal infections.	C.W13, C.W15, C.W18, C.W19, C.W33, C.U10, DU17
		3. Healthcare-associated infections. Infection prevention.	C.W13, C.W15, C.W18, C.W33, C.W40, C.U6, C.U10, C.U15, K1, K2

7. LITERATURE

Obligatory

1. **Textbook of Diagnostic Microbiology, C. R. Mahon, D. C. Lehman, 6th Ed., Elsevier 2019 or 7th Ed., Elsevier 2022.**
2. Medical Microbiology, P.R. Murray, K.S. Rosenthal and M.A. Pfaller. Elsevier. 9th ed. 2020.
3. Training materials provided by the Chair and Department of Medical Microbiology on the e-learning platform.

Supplementary

1. Medical Microbiology, Jawetz, Melnick, & Adelberg's Medical Microbiology, 28th ed. New York, McGraw-Hill, 2019.
2. The European Committee on Antimicrobial Susceptibility Testing – EUCAST - Guidelines and Rationale Documents. https://www.eucast.org/

8. VERIFYING THE EFFECT OF LEARNING

Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion
	Attending classes.	Attendance verification and student activity during classes.
C.W11, C.W12, C.W13, C.W14, C.W15, C.W16, C.W18, C.W19, C.W20, C.W33, C.W40, C.U6, C.U9, C.U10, C.U15, B.U9, D.U17, K1, K2	**Colloquium 1** scope of topics: classes carried out as part of Module I; theoretical colloquium, written, 8 questions. **Colloquium 2** scope of topics: classes carried out as part of Module II; theoretical colloquium, written, 5 questions. **Retake tests (1 and 2)** are oral; committee colloquiums are written (2 assistants check answers). **Colloquium 3** scope of topics: completed as part of Module III (classes and seminars), Practical, oral colloquium. Three tasks: 1. Preparation and diagnosis of microscopic slides; 2. Discussion of the stages of microbiological examination 3. Interpretation of the result of the diagnostic test and an antibiogram. **Retake and committee colloquium** - oral form.	Answer to every question. Rated on a point scale of 0-6. The condition for passing colloquium 1 and 2 is to meet two criteria: answering all questions (obtaining 0 points for any question makes it impossible to obtain a positive grade in the test), and scoring at least 50% of the possible points. --- The grade from colloquium 3 is the arithmetic average of the grades obtained for all tasks included in the colloquium. Failure to complete a task results in a failing grade for this task. The condition for passing colloquium 3 is: completing all tasks – obtaining an unsatisfactory grade for any task makes it impossible to pass the test. Obtaining at least a satisfactory grade (3.0) in the colloquium

		(the grade is calculated as the arithmetic mean of the partial grades).
	Completion of tasks included in the e-learning platform	Getting to know the at least 3 tasks, i.e., descriptions cases and to provide answers to questions on diagnostics microbiological, treatment and/or prevention.
	Observation of the student by the teacher in charge	Sufficient assimilation learning outcomes in the field of knowledge, skills, and competence. Use acquired competences.
	Exam, MCQ	Each question is graded on a point scale: 0 or 1 (0 points – incorrect answer or no answer, 1 point – correct answer. Maximum number of points to obtain: 80. The criterion for passing the exam is obtaining a minimum of 45 points. Score thresholds and corresponding grades: 2.0 (fail) – 0–44 points; 3.0 (satisfactory) – 45–52 points; 3.5 (better than satisfactory) – 53–59 points; 4.0 (good) – 60–66 points; 4.5 (better than good) – 67–73 points; 5.0 (very good) – 74–80 points.

9. ADDITIONAL INFORMATION

Classes and seminars take place in the Department of Medical Microbiology in the Prof. Edmund Mikulaszek Room, Anatomicum building, 2nd floor, 5 Chałubińskiego Street (corner of Oczki).

It is necessary to have protective clothing (cotton apron) during classes.
The laboratory classes are organized as practical activities. Students will be working with infectious material; therefore, the following rules have to be obeyed:

- **hands must be washed and/or disinfected after each class,**
- **jewelry must be removed from hands/wrists for the time of classes.**
- **long hair must be tied back,**
- **outer coats must be left in the cloakroom downstairs,**
- protective gowns must be used in the laboratory classroom (brought to the first laboratory class and stored at the Department of Medical Microbiology for the duration of the course),
- **eating, drinking, smoking (incl. e-cigarettes) is strictly forbidden.**

The student is obliged to comply with the Regulations for the organization of classes in the Department of Medical Microbiology and the Regulations of Studies and Examination of the Medical University of Warsaw.

Classes are held according to the schedule established by the Dean's Office of the Faculty of Medicine of the Medical University of Warsaw.
Detailed regulations of the classes can be found on the website of the Department of https://mikrobiologia.wum.edu.pl Microbiology.
Timetables, teaching materials, information on the course of classes, assessment criteria, and announcements are published on the e-MUW platform: https://e-learning.wum.edu.pl/course/view.php?id=6257

Rules for participation in classes:
1. The student should be prepared for each class. Preparation can be assessed in the form of, for example, an entrance ticket, a test, oral, or written questions. Failure to prepare three times results in the need to complete the material by an additional deadline.
As a preparation for the classes, before each class, students should read a subject-related chapter from one of the books listed in Section 7 – Obligatory literature.
2. The student is obliged to participate in classes with his group. Changing the group is possible only in special cases, after obtaining the consent of the teacher responsible for student affairs.
3. Attendance at all classes and seminars is mandatory.
Classes start on time. Any student who comes late will not be allowed to enter the classroom.
Arriving more than 15 minutes late to class will be considered an absence. We encourage everyone to make every effort to arrive on time and fully engage in the learning experience.

Laboratory classes are composed of theoretical and practical parts, both of which are obligatory to participate in. Seminar classes are compulsory to participate in.

All absences – including excused ones – must be made up for by participating in classes of another group (in the next round), after prior arrangement with the assistant leading the group. Confirmation of making up classes is a completed Card confirming the completion of didactic classes (CCCDC).
Students assigned to the last round of classes who did not participate in classes make up the exercise or seminar on an additional date set by the unit. Homework takes place in the form of direct contact with an academic teacher.
4. The student is obliged to:
- individual arrangement with the teaching assistant on the form, mode, and date of making up for classes.
- ongoing monitoring of your attendance,
- delivering the completed CCCDC to the assistant.

The condition for admission to the exam is attendance at all classes and obtaining a positive grade in each colloquium.
The exam takes place in the summer exam session and consists of 80 single-choice test questions. Exam duration – 80 min.

Students have the opportunity to cooperate scientifically with the Department as part of the activities of the Student Scientific Associations (SSA):
- SSA at the Department of Medical Microbiology of the Medical University of Warsaw, supervisor: dr hab. Ksenia Szymanek-Majchrzak, (ksenia.szymanek-majchrzak@wum.edu.pl)
- SSA of Mycology “Mucor”, supervisor: dr Robert Kuthan (robert.kuthan@wum.edu.pl)
- SSA Microbiology Applied to Clinics and Real life for Students (MACR-S). Supervisors: dr Robert Kuthan (robert.kuthan@wum.edu.pl).

ATTENTION

The final 10 minutes of the last class of the block/semester/year should be allotted for students to fill out the Survey of Evaluation of Classes and Academic Teachers

Parasitology

1. IMPRINT	
Academic Year	2025/2026
Department	Faculty of Medicine
Field of study	Medicine
Main scientific discipline	Medical sciences
Study Profile	General academic
Level of studies	Uniform MSc
Form of studies	Full time studies
Type of module / course	Obligatory
Form of verification of learning outcomes	Exam
Educational Unit / Educational Units	*Department of General Biology and Parasitology, 5 Chałubińskiego Str., 02-004 Warsaw, tel. 22 6212607*
Head of Educational Unit / Heads of Educational Units	*Ph.D., Professor, Daniel Młocicki*
Course coordinator	*Ph.D., Associate Professor, Monika Dybicz, monika.dybicz@wum.edu.pl*
Person responsible for syllabus	*Monika Dybicz, monika.dybicz@wum.edu.pl*
Teachers	Monika Dybicz, Daniel Młocicki, Aleksandra Sędzikowska

2. BASIC INFORMATION			
Year and semester of studies	Year III, winter semester	**Number of ECTS credits**	2.00
FORMS OF CLASSES			

Contacting hours with academic teacher	Number of hours	ECTS credits calculation
Lecture (L)		
Seminar (S)	10	0.40
Classes (C)	25	1.00
e-learning (e-L)		
Practical classes (PC)		
Work placement (WP)		
Unassisted student's work		
Preparation for classes and completions	15	0.60

3. COURSE OBJECTIVES	
O1	The main objective is to provide necessary information on the biology, physiology and morphology of medically important parasites invading the tissues, organs and systems of the human body.
O2	Transfer of knowledge about current problems of medical parasitology, environmental factors of parasite invasion and dispersion, opportunistic species, pathogenesis and course of parasitic diseases in the states of immunosuppression or immunological defects and epidemiology of parasitic invasions.
O3	Making the future doctor aware of the dangers of parasites occurring in Poland and in the world.
O4	Learning the rules for conducting a correct parasitological interview with the patient.
O5	Introduction of the methods of modern laboratory diagnostics. Acquiring the student's ability to correctly interpret diagnostic test results.

4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING

Code and number of the effect of learning in accordance with standards of learning	**Effects in the field of:** *(in accordance with appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019)*
Knowledge – Graduate* knows and understands:	
C.W13	Epidemiology of parasitic infections, including the geographical range of their occurrence.

C.W16	Human invasive forms or developmental stages of selected parasitic fungi, protozoa, helminths and arthropods, considering the geographical range of their occurrence.
C.W17	Principle of the parasite system - host and basic disease symptoms caused by parasites.
C.W19	Basics of parasitological diagnostics.
Skills– Graduate* is able to:	
C.U6	Evaluate environmental threats and use the basic methods to detect the presence of harmful factors (biological and chemical) in the biosphere (in the field of parasitology).
C.U7	Recognize the most common human parasites on the basis of their structure, life cycles and disease symptoms.
C.U9	Prepare the preparation and recognize pathogens under the microscope (in the field of parasitology).

** In appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019 „graduate", not student is mentioned.*

5. ADDITIONAL EFFECTS OF LEARNING *(non-compulsory)*

Number of effect of learning	**Effects in the fields of:**
Knowledge – Graduate knows and understands:	
K1	Health education issues.
K2	Rules of conducting the scientific research and disseminating their results.
Skills– Graduate is able to:	
S1	Carry out diagnostics of parasitic diseases, assess and describe the somatic and mental state of the patient.
S2	Critically evaluate the results of scientific research and properly justify the position.
Social Competencies – Graduate is ready for:	
SC1	Transfer of knowledge in the society about parasitological threats in the country and during foreign travel, especially to tropical and endemic regions.
SC2	Use of objective sources of information.

6. CLASSES

Form of class	**Class contents**	**Effects of Learning**
Seminars and classes	1. Introduction to parasitology. Host-parasite relationship. Protozoa of the digestive and urogenital system (*Giardia intestinalis, Entamoeba histolytica/E. dispar, E. coli, Endolimax nana, Iodamoeba butchlii, Balantidium coli, Blastocystis hominis, E. gingivalis, Trichomonas tenax, Pentatrichomonas hominis, T. vaginalis*). 2. Cellular and tissue protozoans (*Plasmodium* spp., *Trypanosoma* spp., *Leishmania* spp., *Babesia* spp.). 3. Opportunistic and facultative protozoans (*Toxoplasma gondii*, *Cryptosporidium parvum, Cyclospora cayetanensis, Isospora belli, Sarcocystic* spp., *Acanthamoeba* spp., *Naegleria* spp.).	C.W13, C.W16, C.W17, C.W19

	4. Flukes of the digestive and circulatory system (*Fasciola hepatica*, *Opisthorchis felineus*, *Dicrocoelium dendriticum*, *Fasciolopsis buski*, *Schistosoma* spp.). 5. Intestinal tapeworms (*Taenia solium, T. saginata, Rodentolepis nana, Hymenolepis diminuta, Dipylidium caninum*, *Diphyllobothrium latum, Spirometra erinaceieuropaei*). 6. Nematodes of the gastrointestinal tract (*Ascaris lumbricoides, Enterobius vermicularis, Trichuris trichiura, Ancylostoma duodenale, Necator americanus, Strongyloides stercoralis*). 7. Helminths invading human tissues and organs (*Echinococcus granulosus, E. multilocularis, Toxocara canis, Anisakis* spp., *Trichinella* spp.). 8. Filariae (*Loa loa, Onchocerca volvulus, Wuchereria bancrofti, Brugia malayi, Dirofilaria repens, Dracunculus medinensis*). 9. Parasitic arthropods and pathogen carriers. 10. Laboratory diagnostics of parasitic diseases. 11. Repetition. Discussing clinical cases. 12. Preparation recognition.	

7. LITERATURE

Obligatory

1. Essentials of Medical Parasitology. Apurba Sankar Sastry, Sandhya Bhat K. JP Medical Ltd, 2014.

2. Parasitology worbook. Monika Dybicz, Aleksandra Sędzikowska, Monika Pliszka. 2024.

Supplementary

Medical Parasitology. Rohela Mahmud, Yvonne Ai Lian Lim, Amirah Amir. Springer, 2018.

8. VERIFYING THE EFFECT OF LEARNING

Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion
C.W13, C.W16, C.W17, C.W19, C.U6, C.U7, C.U9	Question answer or quiz during classes.	Correct answer to the question.
C.W13, C.W16, C.W17, C.W19, C.U6, C.U7, C.U9	Identification of 3 parasites specimen.	Correct identification of 100% specimen.
C.W13, C.W16, C.W17, C.W19, C.U6, C.U7, C.U9	Exam in the form of a multiple choice test composed of 50 questions.	Obtaining over 55,00% points.

9. ADDITIONAL INFORMATION

1. Students are required to prepare for the course, which will be verified by the student's answer or written test.
2. Due to contact with invasive material during classes, hygiene instructions should be strictly followed.
3. Attendance at all classes is obligatory, attendance should be on time. Absence from class is justified on the basis of a medical certificate or certificate of a random accident. Abandoned class should be done with another group or individually in exceptional situations after prior agreement with the person responsible for the subject (Ph.D. Monika Dybicz).

4. Persons applying for transfer of the subject from previous years or from another university should write an application to the Head of the Department of General Biology and Parasitology and obtain permission of the Faculty Dean.
5. The student can have three attempts to take credit. There are two terms of the final exam.
6. There is Parasitological Scientific Club at the department. For more information contact: monika.dybicz@wum.edu.pl.

ATTENTION

The final 10 minutes of the last class of the block/semester/year should be allotted for students to fill out the Survey of Evaluation of Classes and Academic Teachers

Pathomorfology

1. IMPRINT	
Academic Year	2025/2026
Department	Faculty of Medicine
Field of study	Medicine
Main scientific discipline	Medical Sciences
Study Profile	General academic
Level of studies	Uniform MSc
Form of studies	Full time studies
Type of module / course	Obligatory
Form of verification of learning outcomes	exam
Educational Unit / Educational Units	Department of Pathology (1M11), 7 Pawińskiego St., 02-004 Warsaw, phone 48 22 599-16-70 / fax 22 599-16-71 e-mail: patomorfologia@wum.edu.pl
Head of Educational Unit / Heads of Educational Units	Agnieszka Perkowska-Ptasińska, MD, PhD
Course coordinator	MD, PhD, Magdalena Bogdańska, e-mail: magdalena.bogdanska@wum.edu.pl
Person responsible for syllabus	Paweł Pihowicz, e-mail: pawel.pihowicz@wum.edu.pl
Teachers	Magdalena Bogdańska MD, PhD Łukasz Koperski MD, PhD Paweł Pihowicz MD Karol Kulbaka MD

2. BASIC INFORMATION			
Year and semester of studies	3 rd year, 5 & 6 semester	**Number of ECTS credits**	17.00

FORMS OF CLASSES **Contacting hours with academic teacher**	**Number of hours**	**ECTS credits calculation**
Lecture (L)	40	1,60
Seminar (S)	20	0,80
Classes (C)	100	4
e-learning (e-L)		
Practical classes (PC)		
Work placement (WP)		
Unassisted student's work		
Preparation for classes and completions	265	10,60

3. COURSE OBJECTIVES	
O1	Pathology focuses on determining the cause and nature of disease
O2	Students will be provided with basic knowledge about the mechanisms of the origin and development of disease and its manifestations in the form of molecular, chemical, physiological and morphological changes
O3	Students will be provided with basic knowledge about how human diseases can be diagnosed
O4	Students will be provided with basic knowledge about procedure and regulations for post-mortem examinations
O5	Students will become familiar with procedures and techniques commonly used by pathology laboratory

4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING

Code and number of the effect of learning in accordance with standards of learning	**Effects in the field of:** *(in accordance with appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019)*
Knowledge – Graduate* knows and understands:	
G.K1/ C.W26	pathomorphological terminology
G.K2/ C.W27	basic mechanisms of cell and tissue damage
G.K3/ C.W28	clinical course of inflammatory reactions and repair and the regeneration of tissue and organs
G.K4/ C.W30	aetiology of hemodynamic disorders, regressive and progressive changes

G.K5/ C.W31	detailed organ specific pathology, macroscopic and microscopic pictures, clinical features of pathological changes in particular organs
G.K6/ C.W32	consequences of pathological processes to surrounding organs
Skills– Graduate* is able to:	
G.S1/ C.U11	connect images of damages to tissues and organs with clinical symptoms of a disease, medical history and results of laboratory tests

5. ADDITIONAL EFFECTS OF LEARNING *(non-compulsory)*

Number of effect of learning	**Effects in the fields of:**
Knowledge – Graduate knows and understands:	
K1	
Skills– Graduate is able to:	
S1	
Social Competencies – Graduate is ready for:	
SC1	

6. CLASSES

Form of class	**Class contents**	**Effects of Learning**
Practical classes	CLASSES 1. Hemodynamic disorders-1 2. Hemodynamic disorders, thrombosis, atherosclerosis 3. Regressive lesions-1 4. Regressive lesions-2 5. Tissue repair, Neoplasms-1 6. Neoplasms-2 7. Neoplasms-3 8. Neoplasms-4 9. Neoplasms-5 10. Inflammation-1 11. Inflammation-2 12. Endocrine system 13. Heart and respiratory system 14. Oral cavity and GI tract 15. Liver, pancreas and gallbladder 16. Genital system-1 17. Genital system-2 18. Genital system-3 19. The Kidney	C.W26, C.W27, C.W28, C.W30, C.W31, C.W32, C.U11
Lectures	1. Pathology- history continues; Regressive lesions 2. Neoplasms - introduction 3. Soft tissue tumors-part 1,	C.W26, C.W27, C.W28, C.W30, C.W31, C.W32, C.U11

	4. Soft tissue tumors- part 2 5. Lymphomas- an overview of some NHLs 6. Tuberculosis 7. Lung cancer 8. Testicular tumors 9. Cystic diseases of the kidney	
SEMINARS	1. Glomerular diseases 2. Tumors of the uterine corpus 3. Gestational trophoblastic disease (GTD) 4. GI tract, liver, pancreas and biliary tract pathology Genital system and kidney pathology 5. Renal Cell Carcinoma (RCC) 6. Diabetes mellitus 7. Neurodegenerative diseases 8. Salivary gland pathology 9. Neoplasms of the stomach 10. Environmental and nutritional pathology	C.W26, C.W27, C.W28, C.W30, C.W31, C.W32, C.U11

7. LITERATURE

Obligatory

1. Robbins Basic Pathology, 10th edition, Kumar, Abbas, Aster

Supplementary

1. Robbins and Cotran Review of Pathology, 4th edition
2. Any other recent pathology textbook and atlas

8. VERIFYING THE EFFECT OF LEARNING

Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion
C.W26, C.W27, C.W28, C.W30, C.W31, C.W32, C.U11	Multiple choice questions (MCQ)	<60% fail >/= 60% pass

9. ADDITIONAL INFORMATION

ATTENTION

The final 10 minutes of the last class of the block/semester/year should be allotted for students to fill out the Survey of Evaluation of Classes and Academic Teachers

Laboratory Diagnostics

1. IMPRINT	
Academic Year	2025/2026
Department	Faculty of Medicine
Field of study	Medicine
Main scientific discipline	Medical science
Study Profile	General academic
Level of studies	Uniform MSc
Form of studies	Full time studies
Type of module / course	obligatory
Form of verification of learning outcomes	Exam
Educational Unit / Educational Units	Department of Laboratory Diagnostics and Clinical Immunology of Developmental Age (1WW) 63a Żwirki i Wigury St., 02-091 Warsaw (Pediatric Hospital) Block 2H, second floor +48 22 3179511, 317 95 05 e-mail: zdl@wum.edu.pl
Head of Educational Unit / Heads of Educational Units	Prof. Urszula Demkow

Course coordinator	PhD Małgorzata Wachowska +48 22 317 95 05 e-mail: malgorzata.wachowska@wum.edu.pl
Person responsible for syllabus	Małgorzata Wachowska +48 22 317 95 05 e-mail: malgorzata.wachowska@wum.edu.pl
Teachers	PhD Malgorzata Wachowska, PhD Katarzyna Popko, PhD Aneta Manda-Handzlik, PhD Katarzyna Korniluk, PhD Marzena Iwanowska, Eliza Głodkowska-Mrówka, MSc Adrianna Cieloch

2. BASIC INFORMATION

Year and semester of studies	III year, 6th semester (summer)	**Number of ECTS credits**	2.00

FORMS OF CLASSES **Contacting hours with academic teacher**	**Number of hours**	**ECTS credits calculation**
Lecture (L)	5	0,2
Seminar (S)	25	1
Classes (C)	15	0,6
e-learning (e-L)		
Practical classes (PC)		
Work placement (WP)		
Unassisted student's work		
Preparation for classes and completions	5	0,2

3. COURSE OBJECTIVES

O1	Present basic knowledge on the organization of clinical laboratory, application of laboratory tests as well as practical aspects of simple procedures and functional tests.
O2	Revise existing knowledge on the biochemistry and physiology of the main organ systems of the human body and help students to transfer theoretical knowledge into practical laboratory medicine setting.
O3	Familiarize students with: proper use of laboratory tests in clinical settings, including point-of-care testing; medical consequences of disease on the major organ systems reflected in lab test results;

4. **STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING** *(concerns fields of study regulated by the Regulation of Minister of Science and Higher Education from 26 of July 2019; does not apply to other fields of study)*

Code and number of effect of learning in accordance with standards of learning	**Effects in the field of:** *(in accordance with appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019)*
Knowledge – Graduate* knows and understands:	
E.W7	Student know causes, symptoms, principles of diagnosis and therapeutic management in relation to the most common internal diseases occurring in adults and their complications
E.W7(3)	Student knows characteristics of liver disorders, liver and pancreas disorders, and can perform differential diagnostics of jaundices
E.W7(4)	Student knows carbohydrate metabolism disorders, particularly diabetes, and know how to use laboratory parameters typically utilized in diagnostics and monitoring of patients with metabolic diseases
E.W7(5)	Student knows which laboratory test should be chosen to diagnose, monitor, and predict renal disorders and how to interpret the results
E.W7(6)	Student knows principles of hematopoietic system diseases, including bone marrow aplasia, anemia, granulocytopenia and agranulocytosis, thrombocytopenia, acute leukemias, myeloproliferative and myelodysplastic tumors
E.W7(8)	Student know causes, symptoms, principles of diagnosis allergic
E.W7(9)	Student knows principles of Acid-base balance and water-electrolyte balance disorders: states of dehydration, states of fluid overload, electrolyte disturbances, acidosis and alkalosis
E.W39	Student know types of biological materials used in laboratory diagnostics and principles of sampling for testing
Skills– Graduate* is able to:	
E.U24	Student can interpret laboratory tests results and identify causes of deviations
E.U28	Student can collect and protect the principles of blood, urine, CSF, and body fluids for laboratory testing and knows how to interpret the results
E.U29(9)	Student can perform basic medical procedures including dipstick-tests or capillary blood collection, and glucose measurement in blood

** In appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019 „graduate", not student is mentioned.*

5. **ADDITIONAL EFFECTS OF LEARNING** *(non-compulsory)*

Number of effect of learning	**Effects of learning i time**
Knowledge – Graduate knows and understands:	
K1	the term: norm, range of reference values
K2	the term: diagnostic sensitivity, diagnostic specificity, diagnostic accuracy.
K3	types and characteristics of biological material, rules and methodology of collecting, transporting, storing and preparing it for analysis
Skills– Graduate is able to:	

S1	determine the diagnostic usefulness of a laboratory test
S2	interpret ranges of reference values and assess the dynamics of changes in parameters laboratory
Social Competencies – Graduate is ready for:	
SC1	Team-work
SC2	prove the ability and habit of self-education

6. CLASSES

Form of class	Class contents	Effects of Learning
Lecture	a) Interferences in laboratory tests b) Basic immunology laboratory techniques c) Cerebrospinal fluid	E.W7.
Seminar	a) Laboratory to laboratory diagnostics of hematological disorders (1) b) Laboratory to laboratory diagnostics of hematological disorders (2) c) Serology of blood groups. Laboratory aspects of transfusion medicine. d) Hemostasis in health and disease e) Analysis of urine and laboratory diagnostic of kidney diseases f) Acid-base balance and water-electrolyte balance g) Introduction to Toxicology: therapeutic drug monitoring and drug of abuse h) Introduction to clinical chemistry, proteins and cancer markers i) Laboratory diagnostics of liver diseases, diabetes and other metabolic disorders. Immunochemistry. j) Cardiac markers	E.W7(3), E.W7(4), E.W7(5), E.W7(6), E.W7(9), E.W39, E.W41
Classes	a) Interpretation of laboratory tests and identification of causes deviations b) Analysis of urine c) Blood collection for analysis of ABB parameters c) Glucose measurement d) Laboratory diagnostic of coagulation disorders, INR determination e) Protein electropherogram analysis f) Blood collection, smear preparation and morphology g) Smear analysis h) Serology of blood groups	E.U12, E.U24, E.U28, E.U29(5), E.U29(9). E.W40

7. LITERATURE

Obligatory

1. Clinical Chemistry, Bishop M., Fody E., Schoeff L., 2009, Wolters Kluwer
2. Laboratory Medicine: The Diagnosis of Disease in the Clinical Laboratory 2. edition, Laposata M., 2014, Mc Grow Hill Medical.

Supplementary

8. VERIFYING THE EFFECT OF LEARNING

Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion
G.K1-8, GS1-3	Presence at all seminars and all practical classes. Colloquiums from seminars and practical part - MCQ test, open questions, interpretation of diagnostic results	100% presence threshold number of points (15/25 points), passing grade is 60%
G.K1-8, GS1-3	Exam – MCQ test, open questions, interpretation of diagnostic results	threshold number of points (30/50 points), passing grade is 60%

9. ADDITIONAL INFORMATION *(information essential for the course instructor that are not included in the other part of the course syllabus e.g. if the course is related to scientific research, detailed description of, information about the Science Club)*

Student are obligated to wear labcoats and have shoes changed. All outer garments should be left in the student's cloakroom (hospital, -1 floor).
Students are obligated to prepare for practical classes
There is no possibility to make up seminars or practical classes.
Students are not allowed to change the group during the seminars as well as practical part.
Students who fail the colloquium test are allowed to have 2 retakes. The retakes are scheduled individually.
The final exam is held in computer rooms, it consist of 50 MCQ questions and the passing grade is 60% (30 questions). Thresholds are as follow:

Grade	Number of points
2	< 29
3	30-33
3,5	34-37
4	38-41
4,5	42-45
5	46-50

Students who fail the exam at first term are allowed to retake it during autumn exam session. Students who fail the second term can have commission exam.
Any concerns should be directed to the coordinator of the subject only after making an appointment by email.

ATTENTION
The final 10 minutes of the last class in the block/semester/year should be allocated to students' Survey of Evaluation of Classes and Academic Teachers.

Radiology
(Diagnostic Imaging)

1. IMPRINT	
Academic Year	2025/2026
Department	Faculty of Medicine
Field of study	Medicine
Main scientific discipline	Medical sciences
Study Profile	General academic
Level of studies	Uniform MSc
Form of studies	Full time studies
Type of module / course	Obligatory
Form of verification of learning outcomes	Exam
Educational Unit / Educational Units	Diagnostic Ultrasound Lab Department of Pediatric Radiology (WLS18A) Mazowiecki Bródnowski Hospital, 8 Kondratowicza Street; phone 48 22 326 58 10 e-mail: zdo@wum.edu.pl
Head of Educational Unit / Heads of Educational Units	Assoc. Prof. Bartosz Migda MD, PhD e-mail: bartosz.migda@wum.edu.pl
Course coordinator	Assoc. Prof. Bartosz Migda MD, PhD e-mail: bartosz.migda@wum.edu.pl
Person responsible for syllabus	Assoc. Prof. Bartosz Migda MD, PhD e-mail: bartosz.migda@wum.edu.pl
Teachers	*Assoc. Prof. Bartosz Migda MD, PhD; Assoc. Prof. Ewa Białek, Dr Dominik Nguyen, Dr Remigiusz Krysiak, Dr Michał Kutyłowski, Dr Mateusz Kryczka, Dr Grzegorz Bienia, Dr Katarzyna Prostacka, Dr Marcin Witek*

2. BASIC INFORMATION			
Year and semester of studies	Year 3, 5th Semester (winter)	**Number of ECTS credits**	4.00

FORMS OF CLASSES **Contacting hours with academic teacher**	**Number of hours**	**ECTS credits calculation**
Lecture (L)	10	0.4
Seminar (S)	15	0.6
Classes (C)	47	1.88
e-learning (e-L)		
Practical classes (PC)		
Work placement (WP)		
Unassisted student's work		
Preparation for classes and completions	28	1.12

3. COURSE OBJECTIVES

O1	To acquaint students with conventional X-ray and ultrasound examinations.
O2	To acquaint students with modern advanced Imaging Techniques MR, CT.
O3	To teach students the Basic skill to perform ultrasound which is the stethoscope od modern doctor.

4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING

Code and number of the effect of learning in accordance with standards of learning	**Effects in the field of:** A.W2, A.W3, B.W6, B.W8, B.W9, F.W10, A.U4, F.U7 *(in accordance with appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019)*
Knowledge – Graduate* knows and understands:	
A.W3	topographic relations between particular organs
B.W6	natural and artificial sources of ionising radiation and the mechanisms of interaction of ionising radiation with matter
B.W8.	physical bases of non-invasive imaging techniques
B.W9.	physical bases of the chosen therapeutic techniques including ultrasounds and irradiations
F.W10	problems of contemporary imaging studies, in particular: • radiological symptomatology of basic diseases • instrumental methods and imaging techniques used to perform therapeutic procedures • indications, contraindications and preparation of patients for particular types of imaging examinations and contraindications to the use of contrast agents
Skills– Graduate* is able to:	

A.U4	correlate the relationships between the anatomical structures on the basis of in vivo diagnostic studies, especially medical imaging (X-ray, contrast-enhanced studies, computed tomography CT, magnetic resonance imaging MRI)
B.U2	assess the health effects of absorption of a given dose of ionising radiation and observe the radiation protection rules
F.U7	assess the result of radiographic studies in terms of the most frequent kinds of fractures, especially long bone fractures

** In appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019 „graduate", not student is mentioned.*

5. ADDITIONAL EFFECTS OF LEARNING *(non-compulsory)*

Number of effect of learning	**Effects in the fields of:**
Knowledge – Graduate knows and understands:	
K1	
Skills– Graduate is able to:	
S1	
Social Competencies – Graduate is ready for:	
SC1	

6. CLASSES

Form of class	**Class contents**	**Effects of Learning**
L, S, C	LECTURES Imaging of Patients from the ED – Selected Issues Genitourinary Tract Emergencies in the CNS – A Practical Approach to Typical and Atypical Cases Emergencies in Abdominal Imaging – A Practical Approach Neck Ultrasound – Selected Issues SEMINARS Introduction to medical imaging (Physics!) Hazards and precautions in medical imaging (contrast media, radiation hazards, MRI issues) Cardiovasular system. Emergencies in cardiovasular system Head and Neck (soft tissues, glands in the neck, cervical spine). Central nervous system + spinal cord. Emergencies in CNS Radiological Anatomy (abdominal cavity in CT, MRI). Pathologies in abdominal cavity in CT, MRI How to read abdomen X -ray. Acute abdomen. Abdominal cavity in US (anatomy and pathology). Gastrointestinal tract. Emergencies in GI tract Musculoskeletal system. Skeletal trauma How to read chest X-ray. Diagnostic of the chest. Emergencies in the chest Urinary tract and the male reproductive system. Emergencies in urinary tract and male reproductive system Female reproductive system. Emergencies in female reproductive system	A.W2, A.W3, B.W6, B.W8, B.W9, F.W10, A.U4, F.U7, B.U2

	Breast imaging (US, Mammography, MRI) Vascular System (peripheral arteries and veins, thoracic and abdominal aorta in US, CT, MRI). Emergencies in vascular diseases Multiorgan Trauma WORKSHOPS Ultrasound : introduction, basics, demonstration of US exam, Abdomen B-mode, doppler- vessels US neck, extermities CT MRI	

7. LITERATURE

Obligatory

Core Radiology Second Edition; Ellen X.Sunm Junzi Shi, Jacob C.Mandell,

Supplementary

Gibson R, et al.: Essential Medical Imaging. Cambridge University Press, 2009.
Brant William E., Helms Clyde A.; Fundamentals of diagnostic radiology; Lippincott Williams & Wilkins, 2006.

8. VERIFYING THE EFFECT OF LEARNING

Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion
A.W2, A.W3, B.W6, B.W8, B.W9, F.W10, A.U4, F.U7	**Passing the course:** multiple-choice test with 100 questions, each with 4 answer options, only one of which is correct.	A minimum of **60 correct answers** is required to pass the exam.

9. ADDITIONAL INFORMATION

*(Please write here Information essential for the course instructor that are not included in the other part of the course syllabus, **particularly the number of acceptable tries for passing a subject (§ 26, § 27 and § 28 of Study Regulations), including exam admission passes**, and e.g. if the course is related to scientific research, detailed description of, information about the Science Club)*

ATTENTION

The final 10 minutes of the last class of the block/semester/year should be allotted for students to fill out the Survey of Evaluation of Classes and Academic Teachers

Polish For Medicine – Communication Skills In Medicine

1. IMPRINT	
Academic Year	2025/2026
Department	Faculty of Medicine
Field of study	Medicine
Main scientific discipline	Medical sciences
Study Profile	General academic
Level of studies	uniform MSc
Form of studies	Full-time
Type of module / course	obligatory
Form of verification of learning outcomes	exam
Educational Unit / Educational Units	Foreign Language Department The Didactic Center, ul. Trojdena 2a, 02-109 Warsaw sjosekretariat@wum.edu.pl, tel. 22 5720863 www.sjo.wum.edu.pl/
Head of Educational Unit / Heads of Educational Units	Maciej Ganczar, PhD Professor at MUW, e-mail: maciej.ganczar@wum.edu.pl
Course coordinator	Anna Maczkowska, MA e-mail: anna.maczkowska@wum.edu.pl
Person responsible for syllabus	Anna Maczkowska, MA e-mail: anna.maczkowska@wum.edu.pl
Teachers	Anna Maczkowska, MA

2. BASIC INFORMATION			
Year and semester of studies	3rd, 1st and 2nd semester	**Number of ECTS credits**	3.00

FORMS OF CLASSES **Contacting hours with academic teacher**	**Number of hours**	**ECTS credits calculation**
Lecture (L)		
Seminar (S)		
Classes (C)	60	2,40
e-learning (e-L)		
Practical classes (PC)		
Work placement (WP)		
Unassisted student's work		
Preparation for classes and completions	15	0,60

3. COURSE OBJECTIVES

O1	The third year Polish language course is designed to improve the students' command of the medical language skills and practise history taking and giving instructions to the patient in definite clinical situations.

4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING

Code and number of the effect of learning in accordance with standards of learning	**Effects in time** *(in accordance with appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019)*
Knowledge – Graduate* knows and understands:	
D.W6	the importance of verbal and non-verbal communication in the process of communicating with the patient and the concept of trust in interaction with the patient.
Skills– Graduate* is able to:	
D.U18	communicate with the patient in one of the foreign languages at B2+ level of the Common European Framework of Reference for Languages

** In appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019 „graduate", not student is mentioned.*

5. ADDITIONAL EFFECTS OF LEARNING *(non-compulsory)*

Number of effect of learning	**Effects of learning in time**

Knowledge – Graduate knows and understands:	
K1	the names of the most common diseases and their symptoms in Polish language
K2	
Skills– Graduate is able to:	
S1	conduct a basic bedside conversation and a more detailed conversation with patients affected by the diseases discussed during the 3rd year Polish language course (i.e. ask and answer questions during the medical interview (pertaining to personal history, history of the presenting complaint, past history, family history, drug history, social history, systemic inquiry)
S2	give instructions for the clinical examination of adult and paediatric patients and explain the doctor's intentions
S3	inform the patient as to what diagnostic investigations need to be done.
Social Competencies – Graduate is ready for:	
SC1	continually broadening their knowledge

6. CLASSES

Form of class	Class contents	Effects of Learning
D1/2	Discussing the syllabus (the course content, learning outcomes and the methods of their verification; rules and regulations; credit receiving criteria). Instructions for the clinical examination of adults and children (revision) • Explaining the doctor's intentions to the patient (revision) • The medical interview: personal history, chief complaint, past history, family history, drug history, social history, systemic inquiry (revision)	D.U.18, D.W6 K1 S1, S2, S3
D 3/4	Diseases of the cardiovascular system: symptoms and signs • Diagnostic investigations • The *trzeba/można* + infinitive construction; the doctor's questions and the patient's answers pertaining to the diseases of the cardiovascular system • Pain: location, radiation, onset (timing, setting), previous similar pain, duration, character, severity, aggravating and relieving factors, associated symptoms • Physical examination	D.U.18, D.W6 K1 S1, S2, S3
D 5	Ischaemic heart disease and myocardial infarction: taking history / physical examination (dialogues)	D.U.18, D.W6, D.W6 K1 S1, S2, S3
D 6	Hypertension: taking a history / physical examination (dialogues) /Revision (diseases of the cardiovascular system)	D.U.18, D.W6, D.W6 K1 S1, S2, S3
D 7/8	• Diseases of the respiratory system: symptoms and signs • case taking: the doctor's questions and the patient's answers pertaining to the diseases of the respiratory system • Diagnostic investigations • Physical examination Pneumonia: taking a history / physical examination (dialogues)	D.U.18, D.W6 K1 S1, S2, S3
D 9/10	Asthma: taking a history / physical examination (dialogues) Revision (diseases of the respiratory system. Intermediate test 1	D.U.18, D.W6 K1 S1, S2, S3

D 11/12	Diseases of the digestive system: symptoms and signs • doctor's questions and the patient's answers pertaining to the diseases of the digestive system • Diagnostic investigations • Physical examination Peptic ulcers: taking a history / physical examination (dialogues)	D.U.18, D.W6 K1 S1, S2, S3
D 13/14	Cholelithiasis: taking a history / physical examination (dialogues) Appendicitis: case description.	D.U.18, D.W6 K1 S1, S2, S3
D 15	Revision: diseases of the digestive system. Intermediate test 2.	D.U.18, D.W6 K1 S1, S2, S3
D 16/17	Diseases of the urinary system: symptoms and signs • doctor's questions and the patient's answers pertaining to the diseases of the urinary system • Diagnostic investigations • Physical examination Nephrolithiasis: taking a history / physical examination (dialogues)	D.U.18, D.W6 K1 S1, S2, S3
D18/19	Cystitis: taking history / physical examination (dialogues) Revision (diseases of the urinary system) • Diseases of the male reproductive system: symptoms and signs • doctor's questions and the patient's answers pertaining to the diseases of the reproductive system • Diagnostic investigations • Physical examination	D.U.18, D.W6 K1 S1, S2, S3
D 20/21	Benign prostatic hyperplasia: taking a history / physical examination (dialogues). Intermediate test 3.	D.U.18, D.W6 K1 S1, S2, S3
D22/23	The female reproductive system: symptoms and signs • doctor's questions and the patient's answers pertaining to the diseases of the reproductive system. Breast cancer and endometrial hyperplasia: taking a history / physical examination (dialogues)	D.U.18, D.W6 K1 S1, S2, S3
D24/25	Diseases of the nervous system: symptoms and signs • The medical interview: the doctor's questions and the patient's answers pertaining to the diseases of the nervous system • Diagnostic investigations • Physical examination	D.U.18, D.W6 K1 S1, S2, S3
D26/27	Stroke: taking a history / physical examination (dialogues). Diseases of the nervous system: revision.	D.U.18, D.W6 K1 S1, S2, S3
D28/29	Diseases of the locomotor system: symptoms and signs • doctor's questions and the patient's answers pertaining to the diseases of the locomotor system. Fracture of the neck of the femur: taking a history / physical examination (dialogue). General revision	D.U.18, D.W6 K1 S1, S2, S3
D30	Intermediate test 4	D.U.18, D.W6 K1 S1, S2, S3

7. LITERATURE

Obligatory

Maria Janowska, Świetlana Sikorska "Proszę oddychać! Część III, Warszawski Uniwersytet Medyczny
Handouts prepared by the teachers

Supplementary

8. VERIFYING THE EFFECT OF LEARNING

Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion
D.U18, D.W6	Written exam. Oral exam.	To successfully complete the Polish language course, a student needs to obtain credit for the 3rd year coursework and pass the final examination covering the 1st, 2nd, and 3rd year coursework. To obtain credit for the 3rd year Polish language course, a student is required to: • attend all classes (min. 13 out of 15 in a semester) A student who misses more than 2 classes per semester without a valid excuse will not receive course credits and will not be allowed to sit the course final exam. The only valid excuse for absence is illness. Absences due to illness will be excused on presentation of a valid medical note within one week of return to study. The student is obliged to make up for each absence (excused or unexcused) by performing a special written/oral task assigned by the teacher OR by attending a class with another group (on teacher's permission). If a student misses a class, she/he must catch up on the missed material. It is the student's responsibility to communicate with the class teacher as soon as possible about any attendance issues. • come to classes punctually If a student arrives less than 15 minutes late three times per semester, it will count as one absence. Arriving to class more than 15 minutes late is counted as an absence. • actively participate in each class • complete all the assignments by the due date • pass the progress tests during the 1st and the 2nd semester A student who misses a scheduled test will receive a score of 0 (which equals failing) unless she/he notifies the class teacher of the reason for her/his failure to take the test within three days of the scheduled test date and makes up the missed test if the reason is justified at the date set by the class teacher. A student who fails the course tests can attempt two retakes. A student who fails any of the progress tests at the third attempt needs to repeat the course. After obtaining credit for the 3rd year coursework, a student is eligible to take the final examination, consisting of a written and oral part, in the summer examination session. A minimum score of 60% must be received for each part to pass the examination. The final examination grade is the average (arithmetic mean) of the two (written and oral) examination grades (percentage scores) or a grade of 3 for passing a retake. The dates of the final written and oral parts of the examination are set by the Course Coordinator and the Dean's Office. The document 'Rules of Studies of the Medical University of Warsaw' describes the examination rules and procedures which will apply to the Polish final examination.

		The scale of grades is as follows: 2.0 (failed) Below 60% 3.0 (satisfactory) 60-69% 3.5 (rather good) 70-79% 4.0 (good) 80-85% 4.5 (more than good) 86-90% 5.0 (very good) 91-100%

9. ADDITIONAL INFORMATION

All detailed information about the course completion criteria and rules are listed in the Rules and Regulations of the Centre for Foreign Languages https://sjo.wum.edu.pl/node/449

ATTENTION

The final 10 minutes of the last class of the block/semester/year should be allotted for students to fill out the Survey of Evaluation of Classes and Academic Teachers

ONCOGENETICS

1. IMPRINT	
Academic Year	2025/2026
Department	Faculty of Medicine
Field of study	Medicine
Main scientific discipline	Medical sciences
Study Profile	General academic
Level of studies	Uniform MSc
Form of studies	Full time studies
Type of module / course	Obligatory
Form of verification of learning outcomes	Completion
Educational Unit / Educational Units	Department of Tumor Biology and Genetics Medical University of Warsaw Pawińskiego 7 02-106 Warsaw, Poland Email: onkogenetyka@wum.edu.pl Phone: 48 22 599-1670
Head of Educational Unit / Heads of Educational Units	Prof. Tomasz Stokłosa, MD, PhD e-mail: *tomasz.stoklosa@wum.edu.pl*
Course coordinator	Prof. Tomasz Stokłosa, MD, PhD, e-mail: *tomasz.stoklosa@wum.edu.pl*
Person responsible for syllabus	Grzegorz Placha, MD, PhD, e-mail: *grzegorz.placha@wum.edu.pl*
Teachers	Prof. Tomasz Stokłosa, MD, PhD *tomasz.stoklosa@wum.edu.pl* Marcin Machnicki, PhD *mmachnicki@wum.edu.pl* Anna Pastwińska, PhD, *anna.pastwinska@wum.edu.pl* Grzegorz Placha, MD, PhD *grzegorz.placha@wum.edu.pl* Monika Kolanowska, PhD (guest lecturer)

2. BASIC INFORMATION

Year and semester of studies	III year, 5 semester	**Number of ECTS credits**	1.00

FORMS OF CLASSES	**Number of hours**	**ECTS credits calculation**
Contacting hours with academic teacher		
Lecture (L)		
Seminar (S)	10 (including 2 hours of seminar provided in e-learning)	0,40
Classes (C)	3	0,12
e-learning (e-L)		
Practical classes (PC)		
Work placement (WP)		
Unassisted student's work		
Preparation for classes and completions	12	0,48

3. COURSE OBJECTIVES

O1	Students will be provided with basic knowledge of the role of genetic research in modern oncology and molecularly targeted therapy
O2	Students will be provided with general knowledge about modern methods of genetic research used in oncology and hemato-oncology
O3	Students will be provided with competence in the selection of an appropriate molecular technique and commissioning an appropriate genetic test to search for a genetic defect

4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING

Code and number of the effect of learning in accordance with standards of learning	**Effects in the field of:** *(in accordance with appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019)* C.W4, C.W7, C.W9, C.W11, E.W24, C.W41, C.W42, C.U3, C.U5, B.U10
Knowledge – Graduate* knows and understands:	

C.W4	The graduate knows and understands the structure of chromosomes and the molecular basis of mutagenesis
C.W7	The graduate knows and understands aberrations of autosomes and heterosomes, which are the cause of diseases, including oncogenesis and cancer
C.W9	The graduate knows and understands the basic methods of genetic diagnostics of point and large mutations, implicated in cancer
C.W11	The graduate knows and understands genetic mechanisms of drug resistance by tumor cells
E.W24	The graduate knows and understands basics of early detection of tumours and oncology screening principles;
C.W41	The graduate knows and understands indications for genetic testing performed to ensure individualised pharmacotherapy
C.W42	The graduate knows and understands basic directions of therapy development, in particular the possibility of cell therapy and gene therapy in specific diseases
Skills– Graduate* is able to:	
C.U3	The graduate is able to make decisions about the need to perform cytogenetic and molecular tests
C.U5	The graduate is able to assess the risk of giving birth to an affected child based on family predispositions and influence of environmental factors;

** In appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019 „graduate", not student is mentioned.*

5. ADDITIONAL EFFECTS OF LEARNING *(non-compulsory)*

Number of effect of learning	**Effects in the fields of:**
Knowledge – Graduate knows and understands:	
K1	The graduate knows and understands the basics of early cancer detection and the principles of screening in oncology
K2	The graduate knows and understands the principles of collecting material for toxicological and hemogenetic tests
Skills– Graduate is able to:	
S1	The graduate is able to use databases, including the Internet, and search for the necessary information with the available tools
Social Competencies – Graduate is ready for:	
SC1	The graduate is ready to use reliable sources of information.

6. CLASSES

Form of class	**Class contents**	**Effects of Learning**
Seminars	Seminar 1 ***(e-learning platform***) self-completed before the course - Introduction to oncogenetics. Carcinogenesis, oncogenes and suppressor genes. Types of genetical aberrations in tumors.	CW4
	Seminar 2 - The most important advances in cancer genetic research in the last decade. A brief history of cancer genetics research from Rous	C.W4; C.W7, C.W11

	sarcoma virus to targeted therapy and personalized oncology. Introduction to precision oncology, terms such as “actionable mutations”, “tumor profiling”, “tumor mutational burden”. Seminar 3- Hereditary cancers: genetic predisposition to cancer development; recommendations for diagnostics and prevention. Selected cases and genetic testing revealing the genetic basis of hereditary cancers. Seminar 4- Sporadic cancers: molecular targets for personalized medicine and application of high-throughput analyses. Integration of molecular data in diagnostics, tumors classification and targeted treatment. Seminar 5 – Diagnosis of hematologic malignancies based on cytogenetic and molecular techniques. Molecular biology and cytogenetic methods used in hematology: sample collection, DNA/RNA isolation, in vitro culture, karyotype and FISH analysis, PCR and NGS testing. Analysis of selected clinical cases, interpretation of test results.	C.W7; C.W9; C.W41; C.W42; E.W24; B.U10; C.U3; K1 C.W4; C.W7; C.W9; C.W11; C.W41; C.W42; B.U10; C.U3 ; K2 C.W9; C.U3
Classes	Molecular tumor board (MTB) simulation: interactive analysis of clinical cases based on genetic analysis results and available online databases.	C.W11; C.W41; C.W42; B.U10; C.U3

7. LITERATURE

Obligatory

Robbins, Cotran & Kumar Pathologic Basis of Disease (11. ed.), Kumar, Abbas, Aster, 2025; (selected chapters)
Medical Genetics (6. ed.). Jorde, Carey, Bamshad, 2019; (selected chapters)

Supplementary

Molecular Biology of Cancer: Mechanisms, Targets, and Therapeutics (5. ed.). Pecorino; 2021
Selected publications and guidelines articles available in the e-learning platform as an integral part of the course

8. VERIFYING THE EFFECT OF LEARNING

Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion
C.W4 C.W7 C.W9 C.W11 C.U3	Checking the preparation for the seminars and practical classes. Getting familiar with the content posted on the e-learning platform. Active participation in ALL seminars and practical classes. MCQ test (1st term and 2nd term) – 20 questions	Passing modules with short questions and quizzes on the e-learning platform. Positive evaluation by the teacher. Passing threshold: <60% fail ≥60% pass

9. ADDITIONAL INFORMATION

The subject is closely related to genetic research conducted at the Medical University of Warsaw and diagnostically to the UCK Medical University of Warsaw. The presented clinical cases are examples from our own research and diagnostics activity.

Classes are held in weekly blocks from Monday to Friday in winter semester.
The course's detailed rules and the detail plan will be available on the website:
https://onkogenetyka.wum.edu.pl/en
two weeks before first classes.
In order to complete the course and enter the colloquium all activities on e-learning need to be completed, as well as active participation in all seminars and classes. In the case of a single, justified absence, it is possible to make up the class with another group.
The colloquium is organized by the Exam Bureau with the use of computer rooms of the Teaching Center, 1st term is usually in the week before winter session. The test consists of 20 MCQ questions.
In case of failure to obtain credit in two terms, the student has the option of applying for a commission term (with the consent of the Head of the Department). The final 3rd term (commission) may be conducted either as a test or oral and in accordance with the rules of examinations and credits of the Medical University of Warsaw

CONSULTATIONS are possible after making an appointment with the teacher via e-mail.

Student's scientific group is active in the Department.

ATTENTION

The final 10 minutes of the last class of the block/semester/year should be allotted for students to fill out the

Introduction to Internal Medicine

1. IMPRINT	
Academic Year	2025/2026
Department	Faculty of Medicine
Field of study	Medicine
Main scientific discipline	Medical sciences
Study Profile	General academic
Level of studies	uniform MSc
Form of studies	full-time studies
Type of module / course	obligatory
Form of verification of learning outcomes	credit
Educational Unit / Educational Units	1. Department of Endocrinology, Diabetology and Internal Diseases (2W4); Mazovian Bródnowski Hospital, Kondratowicza 8, 03-242 Warsaw e-mail: endodiab@wum.edu.pl 2. Department of , Transplantology, Immunology, Nephrology and Internal Diseases (1W22) , 59 Nowogrodzka St. 02-006 Warsaw, ph: 48 22 502-12-32, e-mail: medycyna.transplantacyjna@wum.edu.pl
Head of Educational Unit / Heads of Educational Units	1. Prof. Przemysław Witek, MD, PhD (2W4) 2. Prof. Krzysztof Mucha, MD PhD (1W22)
Course coordinator	**1.** (2W4) Paweł Kuca MD, PhD, e-mail: pawel.kuca@wum.edu.pl **2.** (1W22) Tomasz Pilecki MD, PhD,, e-mail: tomasz.pilecki@wum.edu.pl
Person responsible for syllabus	Paweł Kuca MD, PhD, e-mail: pawel.kuca@wum.edu.pl
Teachers	**2W4:** Przemysław Witek, MD, PhD Marek Kowrach, MD, PhD Paweł Kuca, MD, PhD Roman Kuczerowski, MD, PhD Patrycja Adamek, MD

	Olga Gajek-Daszczyńska, MD Aleksandra Dubiel, MD Agnieszka Maksymiuk-Kłos, MD Justyna Nowak, MD Magdalena Poteraj, MD Joanna Sobolewska, MD Agnieszka Wojciechowska – Luźniak, MD Zuzanna Żak, MD **1W22:** Tomasz Pilecki MD, PhD

2. BASIC INFORMATION

Year and semester of studies	III year, 5 & 6 winter/summer semester	**Number of ECTS credits**	5.00

FORMS OF CLASSES **Contacting hours with academic teacher**	**Number of hours**	**ECTS credits calculation**
Lecture (L)	10	0,40
Seminar (S)	20	0,80
Classes (C)	70	2,80
e-learning (e-L)		
Practical classes (PC)		
Work placement (WP)		
Unassisted student's work		
Preparation for classes and completions	25	1,00

3. COURSE OBJECTIVES

O1	Ability to take medical history and perform effective physical examination.
O2	Ability to conduct differential diagnosis and to use proper diagnostic path.
O3	Interpretation of basic laboratory results and imaging studies.

4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING	
Code and number o the effect of learnir in accordance with standards of learnir	**Effects in the field of:** *(in accordance with appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019* E.W1, E.W7 points: 1, 2, 3, 4, 5, 6, 7, 8, 9, E.W40, E.W41, E.U1, E.U3, E.U7, E.U12, E.U13, E.U14, E.U16, E.U18, E.U24, E.U38
Knowledge – Graduate* knows and understands:	
G.K1	knows and understands principles of history taking and physical examination (E.W7 points: 1, 2, 3, 4, 5, 6, 7, 8, 9)
G.K2	knows the typical, common symptoms and signs which are the cause of consultation and admissions to the internal wards, knows how to obtain a proper diagnosis (E.W1, E.W7 points: 1, 2, 3, 4, 5, 6, 7, 8, 9)
G.K3	knows and understands interpretation of laboratory values and others basic tests (E.W7 points 4, 6, 9, E.W40, E.W41)
Skills– Graduate* is able to:	
G.S1	take history and perform physical examination of patients admitted to the internal wards (E.U1, E.U3, E.U7, E.U13)
G.S2	interpret laboratory tests and imaging studies (E.U24)
G.S3	provide differential diagnosis (E.U12)
G.S4	plan diagnostic procedures and treatment (E.U16)
G.S5	prepare and analyse clinical cases (E.U13, E.U38)
G.S6	present a case to other physician, consult relevant abnormalities in laboratory and imaging tests (E.U13, E.U14, E.U16, E.U18)

** In appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019 „graduate", not student is mentioned.*

5. ADDITIONAL EFFECTS OF LEARNING *(non-compulsory)*	
Number of effect of learning	**Effects in the fields of:**
Knowledge – Graduate knows and understands:	
K1	
K2	
Skills– Graduate is able to:	
S1	
S2	
Social Competencies – Graduate is ready for:	

SC1	
SC2	

6. Classes

Form of class	Class contents	Effects of Learning
Bedside classes	Training of practical issues connected with taking history, signs and symptoms assessment. Training of basic practical procedures. Training of differential diagnosis. Interpretation of basic lab tests, imaging studies and basics of ECG.	E.U1, E.U3, E.U7, E.U12, E.U13, E.U14, E.U16, E.U24, E.U38
Seminars	1. History taking 2. Physical examination 3. Cardiovascular system – history taking and physical examination 4. Cardiovascular system – cardiac imaging and catheterization 5. Respiratory system – history taking and physical examination 6. Gastrointestinal system – history taking and physical examination 7. Renal medicine – history taking and physical examination 8. Endocrinology – clinical presentations of selected endocrinopathies (thyrotoxicosis, hypothyroidism, Cushing's syndrome, Addison's disease, acromegaly, hyperandrogenism and hypopituitarism) 9. Neurology – history taking and physical examination, some common presentations 10. Laboratory tests: some major disease patterns; fluid balance and basic principles of IV fluid therapy 11. Diabetes mellitus – classification, presentation, diagnosis 12. Arterial hypertension – classification, presentation, diagnosis and management 13. The musculoskeletal system – history taking and physical examination 14. Diseases of the gastrointestinal tract 15. Haematology – the components of a physical examination 16. Heart failure – basic concepts and management 17. ECG – a methodical approach and ECG abnormalities 18. Pneumonia – presentation, diagnosis and management 19. Acute kidney injury and chronic kidney failure 20. Gastrointestinal bleeding – causes, symptoms and management; endoscopic procedures	E.W1, E.W7 points: 1, 2, 3, 4, 5, 6, 7, 8, 9, E.W40, E.W41

7. Literature

Obligatory

1. Oxford Handbook of Clinical Medicine, 10th edition
2. Macleod's Clinical Examination, 14th edition

Supplementary

1. Harrison's Principles of Internal Medicine, 19th edition.
2. Bate's Guide to Physical Examination and History Taking, 12th edition

8. VERIFYING THE EFFECT OF LEARNING

Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion
G.S1, G.S2, G.S3, G.S4	Active participation in all seminars and classes.	Obligatory attendance and active participation in all seminars and classes.
G.S5	Preparing a power-point presentation of case report.	Presentation of case report.
G.K1, G.K2, G.K3	Execution of assigned tasks on the e-learning platform.	Execution of assigned tasks on the e-learning platform.
G.K1, G.K2, G.K3	Oral colloquium at the end of the course with the appointed doctor separately for each subgroup.	3.0 (satisfactory).

9. ADDITIONAL INFORMATION

Lectures:

Cardiovascular disease risk assessment and management (2 hrs).
Imaging studies in the clinical practice (2 hrs).
Symptoms and signs of endocrine disorders. (2 hrs)
Diabetes mellitus – classification, diagnosis and complications. Metabolic syndrome. (2 hrs)
Laboratory tests interpretation (2 hrs).

(2W4) At the first day of the course we meet at the entrance of the clinic (The Department of Endocrinology, Diabetology and Internal Medicine – Kondratowicza Street 8, building C, 7th floor) at 8:00 a.m. Then we present the detailed schedule of classes. Some seminars and classes may be conducted as e-learning, depending on epidemiological situation.

Students are expected to come to the class on time.
Students are required to bring doctor's apron, stethoscopes, shift shoes, flashlight, and personal protective equipment (depending on the epidemiological situation).
Outer clothes must be left in the cloakroom downstairs.
Jewelry must be removed from hands/wrists for the time of classes.
Long hair must be tied back.
To provide good learning environment for everyone, students are requested to turn off any electronic devices that might disturb the class.
Some seminars and classes may be conducted as e-learning, depending on the epidemiological situation.

ATTENTION
The final 10 minutes of the last class in the block/semester/year should be allocated to students' Survey of Evaluation of Classes and Academic Teachers.

Medical Psychology

1. IMPRINT	
Academic Year	2025/2026
Department	Faculty of Medicine
Field of study	Medicine
Main scientific discipline	Medical sciences
Study Profile	General academic
Level of studies	Uniform MSc
Form of studies	Full time studies
Type of module / course	Obligatory
Form of verification of learning outcomes	Completion
Educational Unit / Educational Units	Studium Psychologii Zdrowia [Department of Health Psychology] ul. Litewska 14/16, 00-575 Warszawa, Tel. +48 22 116 92 11
Head of Educational Unit / Heads of Educational Units	Professor Dorota Włodarczyk, MA, PhD
Course coordinator	Magdalena Łazarewicz, MA, PhD magdalena.lazarewicz@wum.edu.pl
Person responsible for syllabus	Magdalena Łazarewicz, MA, PhD magdalena.lazarewicz@wum.edu.pl
Teachers	Magdalena Łazarewicz, MA, PhD (magdalena.lazarewicz@wum.edu.pl) Mariusz Jaworski, MA, PhD (mariusz.jaworski@wum.edu.pl) Tomasz Duda, MA, PhD (tomasz.duda@wum.edu.pl) Marcin John, MA (marcin.john@gmail.com)

2. BASIC INFORMATION			
Year and semester of studies	III year, 1st semester	**Number of ECTS credits**	1.00

FORMS OF CLASSES **Contacting hours with academic teacher**	**Number of hours**	**ECTS credits calculation**
Lecture (L)		
Seminar (S)	10	0.40
Classes (C)	10	0.40
e-learning (e-L)		
Practical classes (PC)		
Work placement (WP)		
Unassisted student's work		
Preparation for classes and completions	5	0.20

3. COURSE OBJECTIVES	
O1	Student acquires skills and knowledge on the psychological aspects of the medical patient care, is familiar with the concept of health-related quality of life and understands psychosocial consequences of hospitalization and chronic illness.
O2	Student understands and is able to identify psychosocial risk factors of somatic diseases, knows the mechanisms of human functioning in health and illness (including terminal disease).
O3	Student gets familiar with a problem of abuse and basic methods of psychological intervention.
O4	Student understands the elements of the patient's perspective, knows how to diagnose the patient's attitude toward illness and treatment; is familiar with motivational interviewing and health promotion methods.
O5	Student learns how age and age-related developmental needs can affect delivery of care and responses to illness and how to respond to them effectively.
O6	Student knows the signs of work stress and burnout and is familiar with available preventive methods.

4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING	
Code and number of the effect of learning in accordance with standards of learning	**Effects in the field of:**
Knowledge – Graduate* knows and understands:	

D.K1	social dimension of health and illness, the impact of the social environment (family, social networks) and social inequalities as well as socio-cultural differences on health, as well as the role of social stress in health and self-destructive behaviour
D.K2	social factors influencing behaviour in health and disease, especially in chronic disease
D.K3	forms of abuse, models explaining family and institutional abuse, social bases of different forms of abuse and the doctor's role in recognizing it
D.K4	Social approached to the meaning of health, illness, disability and aging in the relation to social attitudes, social consequences of the somatic disease, disability and socio-cultural barriers, and the concept of health related quality of life
D.K7	psychosocial consequences of hospitalization and chronic disease
D.K9	basic human psychological mechanisms of functioning in health and disease
D.K10	the role of the family in the treatment process
D.K11	aspects of adaptation to the disease as a challenging situation, phases of adaptation to threatening situation, including dying and grief
D.K12	the role of stress in etiopathogenesis and progress of the somatic disease and recognizes coping mechanisms
D.K14	the principles of health promotion, its tasks and main lines of action, with particular emphasis on knowledge of the role of elements of a healthy lifestyle
D.K15	the principles of motivating the patient to health promoting behaviours and informing about unfavorable prognosis
Skills– Graduate* is able to:	
D.S1	in the whole therapeutic process, include patient's subjective needs and expectations resulting from socio-cultural background
D.S2	recognize signs of risk and auto destructive behaviours and reacts to them accordingly
D.S3	chooses treatment which minimizes social consequences of the disease for the patient
D.S10	recognizes signs of abuse and its risk factors and reacts accordingly
D.S11	applies basic psychological motivational and supportive interventions

** In appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019 „graduate", not student is mentioned.*

5. ADDITIONAL EFFECTS OF LEARNING *(non-compulsory)*	
Number of effect of learning	**Effects in the field of:**
Knowledge – Graduate knows and understands:	
K1	the concept of professional burnout and understands how it can be prevented
Skills– Graduate is able to:	
S1	-

Social Competencies – Graduate is ready for:	
SC1	-

6. CLASSES

Form of class	Class contents	Effects of Learning
S	S1 - Seminar 1 – Psychosocial aspects of the medical profession Introduction to Medical Psychology. The concept of professional burnout. Strategies of preventing burnout and coping with stress.	D.K1, K1, D.K12
	S2 - Seminar 2 – Stress and abuse. Theoretical bases of stress and coping. The role of a doctor in recognizing and preventing abuse/domestic violence. Basic psychological interventions in the situation of abuse. Biopsychosocial approach to patients in medical practice.	D.K3, D.K12, D.S10
	S3 – Seminar 3 - The role of psychosocial factors in etiopathogenesis of somatic disease. Promoting health in medical practice. Motivational interview – Applying basics of motivational interviewing in medical practice.	D.K2, D.K10, D.K12, D.K14, D.K15, D.S2, D.S11
C	C1 – Class 1 - The concept of health-related quality of life, psychosocial consequences of disease and adaptation to illness. Attitude towards health and illness.	D.K1, D.K4, D.K7, D.K9, D.K11, D.S1, D.S3
	C2 – Class 2 - Psychological aspects of disability. Health and illness across lifespan	D.K9, D.K11, D.S1
	C3 – Class 3 - Psychological aspects of death, dying, care for terminal patients and grief. Delivering bad news- Practice in delivering bad news, examples of protocols for delivering bad news to patients and their families.	D.K10, D.K11, D.K15, D.S1
S	S4 – Seminar 4 - Test	

7. LITERATURE

Obligatory

PDF materials provided by the teacher during the course.

Supplementary

Van Teijlingen E. & Humphris, G. (2019). Psychology and Sociology Applied to Medicine. Elsevier.
Feldman, M & Christensen, J.(2014). Behavioral Medicine. A guide for Clinical Practice. McGraw-Hill Medical
Ofri, D.(2014). What doctors Feel: How Emotions Affect the Practice of Medicine. Beacon Press.
Gabe, J. & Monaghan, L.(2013). Key Concepts in Medical Sociology (SAGE Key Concepts series). Sage Publications
The above textbooks are available for short rental from the Department of Psychology and Medical Communication library (single copies).

8. VERIFYING THE EFFECT OF LEARNING

Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion

D.K1-D.K4, D.K7. D.K9-D.K12, D.K14-D.K15, D.S1-D.S3, D.S10, D.S11, K1	Written colloquium - the colloquium consists of 5 questions and a case study. Two questions concern knowledge from the entire course (they do not relate to the case study). Three questions concern a case study and require students to use their knowledge and skills to solve a problem from clinical practice.	Min. 60% of correct answers

9. ADDITIONAL INFORMATION

Attendance: Students are expected to attend and actively participate in all seminars and classes. Only one excused absence is permitted during the course. In the event of such an absence, students must make up the missed work. They should notify the instructor as soon as possible to determine the method for covering the missed material (e.g., an additional question on the test or an oral response to the instructor).
Group changes (during seminars) or subgroup changes (during classes) are allowed only with prior approval from the course coordinator. Punctuality is essential. Arriving more than 15 minutes late will be counted as an absence. Repeated lateness may require the student to complete additional work—such as an essay or brief literature review—at the instructor's discretion, depending on the material missed. To maintain a productive learning environment, students must turn off or silence all electronic devices that could disrupt the class.

Final Test: The final test will be held during the last seminar (7th week of the course). It will consist of:

- Case Study – Analysis of a patient's case, answered through short open-ended questions.
- Two Theoretical Questions – Open-ended responses.

Students may attempt the test up to three times in total (one initial attempt and two retakes).

Contact information to the **course coordinator**: Magdalena Łazarewicz, MA, PhD, magdalena.lazarewicz@wum.edu.pl

The Department of Health Psychology runs the Psychological Students Science Club "Psyche" (in English) (contact information: magdalena.lazarewicz@wum.edu.pl).

ATTENTION

The final 10 minutes of the last class of the block/semester/year should be allotted for students to fill out the Survey of Evaluation of Classes and Academic Teachers

Medical Communication

1. IMPRINT	
Academic Year	2025/2026
Department	Faculty of Medicine
Field of study	Medicine
Main scientific discipline	Medical sciences
Study Profile	General academic
Level of studies	Uniform MSc
Form of studies	Full time studies
Type of module / course	Obligatory
Form of verification of learning outcomes	Completion
Educational Unit / Educational Units	Studium Psychologii Zdrowia [Department of Health Psychology] ul. Litewska 14/16, 00-575 Warszawa, Tel. +48 22 116 92 11
Head of Educational Unit / Heads of Educational Units	Professor Dorota Włodarczyk, MA, PhD
Course coordinator	Magdalena Łazarewicz, MA, PhD magdalena.lazarewicz@wum.edu.pl
Person responsible for syllabus	Magdalena Łazarewicz, MA, PhD magdalena.lazarewicz@wum.edu.pl
Teachers	Magdalena Łazarewicz, MA, PhD (magdalena.lazarewicz@wum.edu.pl) Mariusz Jaworski, MA, PhD (mariusz.jaworski@wum.edu.pl) Tomasz Duda, MA, PhD (tomasz.duda@wum.edu.pl) Marcin John, MA (marcin.john@gmail.com)

2. BASIC INFORMATION			
Year and semester of studies	III year, 1st semester	**Number of ECTS credits**	1.00

FORMS OF CLASSES **Contacting hours with academic teacher**	**Number of hours**	**ECTS credits calculation**
Lecture (L)		
Seminar (S)		
Classes (C)	10	0.4
e-learning (e-L)		
Practical classes (PC)		
Work placement (WP)		
Unassisted student's work		
Preparation for classes and completions	15	0.6

3. COURSE OBJECTIVES	
O1	The aim of the course is to provide students with opportunity to develop skills in building proper doctor-patient relationship through medical communication, as well as to increase awareness of the student's own communication style.
O2	To improve skills in nonverbal communication during conducting a consult (to raise awareness of student's own non-verbal behaviours and sensitivity to nonverbal cues from a patient).
O3	To improve skills in verbal communication during a consult - active listening: discovering patient's perspective, collecting and passing information (including bad news) and including the patient into treatment process and making decisions regarding treatment.
O4	To provide practice in applying basic motivational and supportive interventions.
O5	To provide practice in group work: delivering and receiving constructive feedback information.
O6	To increase empathy by experiencing the role of a patient in a safe learning environment.

4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING	
Code and number of the effect of learning in accordance with standards of learning	**Effects in the field of:**
Knowledge – Graduate* knows and understands:	

D.K5	the rules and methods of communication with the patient and his family, which are used to build an empathic, trust-based relationship
D.K6	the role of good verbal and nonverbal communication in doctor-patient interaction, the meaning of trust in the interaction with patients
Skills– Graduate* is able to:	
D.S1	In the whole therapeutic process, include patient's subjective needs and expectations resulting from socio-cultural background
D.S2	recognize signs of risk and auto destructive behaviors and reacts to them accordingly
D.S3	choose treatment which minimizes social consequences of the disease for the patient
D.S4	build the atmosphere of trust during the treatment process
D.S5	conduct the consult with the patient with the use of active listening skills and empathy, and talks to the patient about his life situation
D.S6	inform the patient about the goal, progress and possible risks of suggested diagnostic and treatment methods
D.S7	Involve the patient in the therapeutic process
D.S8	pass bad news to the patient and his/her family
D.S9	passes recommendations and information on health promoting lifestyle
D.S11	apply basic psychological motivational and supportive interventions

** In appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019 „graduate", not student is mentioned.*

5. ADDITIONAL EFFECTS OF LEARNING *(non-compulsory)*

Number of effect of learning	**Effects in the field of:**
Knowledge – Graduate knows and understands:	
K1	-
Skills– Graduate is able to:	
S1	-
Social Competencies – Graduate is ready for:	
SC1	-

6. CLASSES

Form of class	**Class contents**	**Effects of Learning**
C	Classes 1: Medical Communication – review and summary: skills (verbal and nonverbal communication bases for active listening) and	D.K5, D.K6

	protocols (Calgary-Cambridge Protocol, SPIKES); preparation for role-playing exercises.	
C	Classes 2-4: Practical exercises of the use of psychological knowledge and communication skills for solving problems in medical practice (based on role-playing exercises), e.g. collecting a basic medical interview in a primary care setting and in an ER, passing bad news to the patient and the family, explaining medical procedures, motivating the patient for better adherence or a lifestyle change..	D.S1-D.S9, D.S11

7. LITERATURE

Obligatory

Lloyd, M., Bor R., Noble, L. (2019) Clinical Communication Skills for Medicine. Elsevier.

Required communication protocols as PDF materials provided by the teacher during the course.

Supplementary

Cole, S., Bird, J. & Weiner, J.S.(2014). Medical Interview. Elsevier.

Silverman, J., Kurtz, S, Draper J (2008) Skills for Communicating with Patients. Radcliffe Publishing.

8. VERIFYING THE EFFECT OF LEARNING

Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion
D.S1-D.S9, D.S11	Participation in the video-recorded role-playing exercise as a doctor and as a patient.	Minimal acceptable level of performance on the learning outcome
D.K5, D.K6	Preparation of the essay self-evaluating communication skills performed in the role-playing exercise.	Minimal acceptable level of performance on the learning outcome, providing answers to all points included in the instruction.

9. ADDITIONAL INFORMATION

Attendance
The class is intendent as practical and is based on experiential learning. The outcomes of that process are strongly related to active participation in all in-class activities, therefore attendance is mandatory. Students will be required to make up missed work in case of an excused absence. In such cases students should notify the teacher as soon as possible to establish the way of covering the absence. Change of subgroups is possible only after consulting the teacher in advance and not for the classes for which the particular student's role-playing exercise was scheduled. Students are expected to come to the class on time and participate actively (in the role-playing exercises as doctors/patients and during discussions). Being late for over 15 minutes counts as an absence. Recurring tardiness will result in additional work – an essay or short review of literature (based on the decision of the teacher, depending on the missed material).
To provide good learning environment for everyone, students are requested to turn off any electronic devices that might disturb the class.

Role-playing
The classes are based on role-playing exercises and each student is required to participate in two role-playing scenes: once as a doctor and once as a patient. Scenarios are delivered to students prior to the class. The role-playing are video recorded (on the student or teacher's equipment). The video is only made available to the participants of a given role-playing exercise.

Essay
To complete the course students are required to write an essay, which presents reflections regarding communication process during the role-play. The paper should be delivered to the teacher within a week from the class on which the particular role-playing exercise took place. Detailed guidelines for this task are provided and discussed during the course.

The Department of Health Psychology runs the Psychological Students Science Club "Psyche" (in English) (contact information: magdalena.lazarewicz@wum.edu.pl).

ATTENTION

The final 10 minutes of the last class of the block/semester/year should be allotted for students to fill out the Survey of Evaluation of Classes and Academic Teachers

Pharmacology and Toxicology

1. IMPRINT	
Academic Year	2025/2026
Department	Faculty of Medicine
Field of study	Medicine
Main scientific discipline	medical sciences
Study Profile	general academic
Level of studies	uniform MSc
Form of studies	Full time studies
Type of module / course	Obligatory
Form of verification of learning outcomes	Credit
Educational Unit / Educational Units	Chair and Department of Experimental and Clinical Pharmacology Centre for Preclinical Research and Technology CePT, Banacha 1b, 02-927 Warsaw, tel. (+48) 22 116 61 60
Head of Educational Unit / Heads of Educational Units	Prof. Dagmara Mirowska-Guzel MD, PhD, SciD tel. (+48) 22 1166160
Course coordinator	Maciej Niewada MD, PhD, SciD tel. (+48) 691745377
Person responsible for syllabus	Maciej Niewada MD, PhD, SciD tel. (+48) 691745377
Teachers	Jan Bembenek MD, PhD, SciD Iwona Korzeniewska-Rybicka MD, PhD Marcin Granat, MSc Pharm Wojciech Masełbas MD, PhD Maciej Niewada MD, PhD, SciD Ceren Postula, MSc, PhD, SciD Justyna Pyrzanowska MD, PhD, SciD Ewa Widy-Tyszkiewicz MD, PhD, SciD Aleksandra Wisłowska-Stanek MD, PhD, SciD

2. BASIC INFORMATION

Year and semester of studies	III year 5 & 6 semester	**Number of ECTS credits**	9.00

FORMS OF CLASSES **Contacting hours with academic teacher**	**Number of hours**	**ECTS credits calculation**
Lecture (L)	30 (30h e-learning)	1,20
Seminar (S)	10	0,40
Classes (C)	60	2,40
e-learning (e-L)		
Practical classes (PC)		
Work placement (WP)		
Unassisted student's work		
Preparation for classes and completions	125	5,00

3. COURSE OBJECTIVES

O1	Concepts and principles of mechanism of action, clinical applications and adverse effects of drugs.
O2	Translation of pharmacological principles into clinical decision-making.
O3	

4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING

Code and number of the effect of learning in accordance with standards of learning	**Effects in the field of:** *(in accordance with appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019)*
Knowledge – Graduate* knows and understands:	
G.K1	C.W11. genetic mechanisms of acquiring drug resistance by microorganisms and neoplastic cells; C.W15. the consequences of exposure of the human body to various chemical and biological factors and the principles of prevention; C.W20. basics of disinfection, sterilization and aseptic procedures;

	C.W35. individual groups of therapeutic agents; C.W36. main mechanisms of drug action and their changes in the system depending on age; C.W37. the impact of disease processes on drug metabolism and elimination; C.W38. basic principles of pharmacotherapy; C.W39. major drug side effects, including drug interactions; C.W40. the problem of drug resistance, including multi-drug resistance; C.W41. indications for genetic tests carried out in order to individualize pharmacotherapy; C.W42. basic directions of therapy development, in particular the possibilities of cell, gene and targeted therapy in specific diseases; C.W43. basic concepts of general toxicology; C.W44. a group of drugs, the abuse of which can lead to poisoning; C.W45. symptoms of the most common acute poisonings, including alcohol, drugs and other psychoactive substances, heavy metals and selected groups of drugs; C.W46. basic principles of diagnostic procedures in poisoning; C.W48. the consequences of a deficiency of vitamins or minerals and their excess in the body;
G.K2	
Skills– Graduate* is able to:	
G.S1	C.U10. interpret the results of microbiological tests; C.U13. perform simple pharmacokinetic calculations; C.U14. select drugs in appropriate doses in order to correct pathological phenomena in the body and in individual organs; C.U15. design schemes of rational chemotherapy of infections, empirical and targeted; C.U16. prepare records of all prescription forms of medicinal substances; C.U17. use pharmaceutical guides and databases on medicinal products; C.U18. estimate the toxicological risk in specific age groups and in the states of liver and kidney failure and prevent drug poisoning; C.U19. interpret the results of toxicological tests
G.S2	

** In appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019 „graduate", not student is mentioned.*

5. ADDITIONAL EFFECTS OF LEARNING *(non-compulsory)*	
Number of effect of learning	**Effects in the fields of:**
Knowledge – Graduate knows and understands:	
K1	
K2	
Skills– Graduate is able to:	
S1	
S2	
Social Competencies – Graduate is ready for:	
SC1	

SC2	

6. CLASSES

Form of class	Class contents	Effects of Learning
Seminars and classes:	1. Pharmacokinetics I. 2. Pharmacokinetics II. 3. Chemotherapeutic agents I. 4. Chemotherapeutic agents. II. 5. Chemotherapeutic agents III. 6. Anthelmintic drugs. Antiprotozoal drugs. Antifungal drugs. 7. Drugs used in gastrointestinal diseases. Control of gastric acidity and treatment of peptic ulcers. Emetic drugs and antiemetic drugs. Drugs which increase gastro-intestinal motility. Antidiarrheal drugs. 8. Agents used in disorders of coagulation. 9. Adrenocorticosteroids and adrenocortical antagonists. The hypothalamic and pituitary hormones. Sex hormones – estrogens, progestins, androgens. 10. Pancreatic hormones and antidiabetic drugs. Thyroid and antithyroid drugs. 11. Prescription writing. 12. Drugs used in respiratory diseases. 13. CV drugs 1. Catecholamines and sympathomimetic drugs. Adrenergic receptor antagonists. 14. CV drugs 2. Calcium channel blockers. Diuretic agents. 15. CV drugs 3. Drugs affecting RAAS. Other vascular drugs. 16. Lipid lowering agents. Drugs in treatment of obesity. 17. Opioid analgesics and antagonists. 18. Nonsteroidal anti-inflammatory drugs and non-opioids analgesics. 19. Psychostimulants. Anxiolytics. 20. Antipsychotic agents. 21. Antidepressant agents. 22. Drugs used in neurological disorders.	CW11-CW48 CU10-CU19
Lectures	1. Introduction to pharmacology. Basic principles. Reliable sources of information in pharmacology. 2. Pharmacodynamics: drug action, the relationship between drug concentration and effect. 3. Antiviral drugs. 4. Drug prevention of infectious diseases. 5. Drugs used in chemotherapy of tuberculosis and leprosy. 6. Rational use of chemotherapeutics. 7. Agents that affect bone mineral homeostasis. Drugs used in rheumatology. 8. Agents used in cytopenias. Hetapoietic growth factors. 9. Agents acting at the neuromuscular junction and autonomic ganglia. Cholinergic agonists. Cholinoceptor-blocking drugs. 10. Mediators of inflammation and allergy. Anti-allergic drugs. Immunopharmacology. 11. Cancer drugs. 12. Local and general anaesthetics. 13. Antihypertensive agents. 14. Drugs used in angina pectoris. 15. Agents used in cardiac arrhythmias. 16. Drugs used in ophthalmology.	CW11-CW48 CU10-CU19

	17. Dermatologic pharmacology. 18. Pharmacology of alcohol consumption. 19. Drugs of abuse. 20. Principles of toxicology. Harmful effects of drugs. 21. Occupational and environmental toxicology. 22. Agents used in anaemias. Pharmacology of vitamins.	

7. LITERATURE

Obligatory

1. Humphrey P. Rang, James M. Ritter, Rod J. Flower, Graeme Henderson. Rang & Dale's Pharmacology, 9th Edition. 2018.
2. Bertram G. Katzung. Basic and Clinical Pharmacology 15th Edition. 2021.
3. Katzung & Trevor's Pharmacology Examination and Board Review, Mcgraw Hill Education & Medic, 13th Edition, 2021.
4. Goodman and Gilman's The Pharmacological Basis of Therapeutics. Laurence Brunton, Bjorn Knollman, Randa Hilal-Dandan, McGraw-Hill Education, 14th Edition. 2022.

Supplementary

1. Paweł Krząścik, Przemysław Mikołajczak. Pharmacology in a nutshell. 2017. 1st Edition. ISBN: 978-83-941043-2-0
2. Lippincott Illustrated Reviews: Pharmacology, 7th edition, Karen Whalen PharmD, BCPS, Publication Date October 2, 2018
3. BRS Pharmacology, Author(s): Sarah Lerchenfeldt , Gary Rosenfeld Ph.D., 7th edition, publication date: August 12, 2019

8. VERIFYING THE EFFECT OF LEARNING

Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion
CW11-CW48 CU10-CU19	Attendance Multiple choice tests or oral credits	>50% *Grade and criteria:* *2,0 (unsatisfactory)<=50%* *3,0 (satisfactory) 51-58%* *3,5 (better than satisfactory) 59-68%* *4,0 (good) 69-78%* *4,5 (better than good) 79-88%* *5,0 (very good) >=89%*

9. ADDITIONAL INFORMATION

Students are communicated and updated via TEAMS platform.
Seminars, classes and lectures are held at Rectorate building of MUW, Main Library, Didactic Center – Banacha Campus, Żwirki i Wigury 61. Students are obliged to attend all practical classes and seminars with the group assigned only (individual arrangements are to be approved in written (mail) in advance).

After both V and VI semesters students are obliged to complete the final credits in form of MCQ or oral colloquium that covers the scope of classes, seminars and lectures. After the retake there is one more try to pass in form of commission. Total number of tries is 3.

Credits of the both tests on V and VI semesters entitle the student to join Clinical Pharmacology subject at the VII semester. Final exam at the end of VII semester covers both pharmacology/toxicology and clinical pharmacology.

Rules on colloquiums and Q&A tests

1. Students are informed about the date/time and the venue for MCQ tests either for semester colloquium or final exam at least one month in advance.
2. Students are expected to arrive at the venue at least 15 minutes before test start. Those who are late more than 15 minutes after the test start are not allowed to enter and are kindly invited for the retake.
3. To facilitate students identification ID document (preferably student record book) need to be presented, otherwise students are not allowed to take the test.
4. Students are asked to wait outside the room and can enter only following identification confirmed.
5. Students are allocated the individual place which is pointed by supervisor.
6. **The test is based on student individual work - unauthorized materials (including revision notes and electronic devices including mobile phones) are disallowed. Communication with any person during the exam, other than the supervisor, is prohibited and can be the cause for student banning.**
7. For MCQ tests only one answer is correct.
8. To pass the test students need to provide 50% + 1 (i.e. 51 for 100 questions) correct answers. The final individual score is based on the number of correct answers provided and other students' performance (the distribution of test results).
9. The form of retake is usually the same as first approach unless number of students for retake determines the feasible form which then is individually decided.

ATTENTION

The final 10 minutes of the last class in the block/semester/year should be allocated to students' Survey of Evaluation of Classes and Academic Teachers.

Introduction to Pediatrics

1. IMPRINT	
Academic Year	2025/2026
Department	Faculty of Medicine
Field of study	Medicine
Main scientific discipline	Medical science
Study Profile	General academic
Level of studies	Uniform MSc
Form of studies	full-time studies
Type of module / course	Obligatory
Form of verification of learning outcomes	**credit**
Educational Unit / Educational Units	Department of Pediatrics with Clinical Assessment Unit. (2W9) 63a Żwirki i Wigury St., 02-091 Warsaw (Pediatric Hospital) Phone: 48 22 317 92 31 e-mail: obserwacyjny.dsk@uckwum.pl
Head of Educational Unit / Heads of Educational Units	Assoc. Prof. Ernest Kuchar, MD, PhD

Course coordinator	Assoc. Prof. Ernest Kuchar, MD, PhD
Person responsible for syllabus	1. Anna Piwowarczyk, MD, anna.piwowarczyk@wum.edu.pl 2. Monika Wanke-Rytt, MD, PhD, monika.wanke@uckwum.pl
Teachers	**Department of Pediatrics with Clinical Assessment Unit (2W9)** Ernest Kuchar, MD, PhD Anna Piwowarczyk, MD, PhD Magdalena Okarska-Napierała, MD, PhD Monika Wanke-Rytt, MD, PhD Dominika Rykowska, MD Joanna Mańdziuk, MD Weronika Woźniak, MD

2. BASIC INFORMATION

Year and semester of studies	3rd year, 5th and 6th semester	**Number of ECTS credits**	4,00

FORMS OF CLASSES **Contacting hours with academic teacher**	**Number of hours**	**ECTS credits calculation**
Lecture (L)		
Seminar (S)	20	0,80
Classes (C)	40	1,60
e-learning (e-L)		
Practical classes (PC)		
Work placement (WP)		
Unassisted student's work		
Preparation for classes and completions	40	1,60

3. COURSE OBJECTIVES

O1	Acquiring knowledge of child development, nutrition, and physiology from birth to puberty.
O2	Acquiring skills to examine a child's development both subjectively and physically across different stages.

O3	Caring for the child while fulfilling the doctor's role and enhancing skills to provide personalized care for both healthy and sick children.
04	Describe health maintenance and preventive care for children: • nutrition, • vaccination, • screening tests • hydration • risk factor identification and modification.
05	Learn effective team and interpersonal communication skills, including empathetic communication with parents or guardians of children.
06	Apply principles of physiology and pharmacology to children from birth through adulthood, especially age-related changes.
07	Acquiring knowledge of a physician's responsibilities, duties, and powers in pediatric and primary care units.

4. **STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING** *(concerns fields of study regulated by the Regulation of Minister of Science and Higher Education from 26 of July 2019; does not apply to other fields of study)*

Code and number of effect of learning in accordance with standards of learning	**Effects in time** *(in accordance with appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019)* G.K.1-3, 6 G.S.2,4,7,9,10-14, 27,29,38

Knowledge – Graduate* knows and understands:

E.W1	environmental and epidemiological conditions of the most common diseases
E.W2	principles of feeding healthy and sick children, including natural feeding, vaccination
E.W3	causes, symptoms, principles of diagnosis and therapeutic management for the most common diseases in children: 1) rickets, tetany, fits, 2) heart defects, myocarditis, endocarditis and pericarditis, cardiomyopathy, abnormal heart rhythm, cardiac failure, hypertension, syncope, 3) acute and chronic diseases of the upper and lower respiratory tract, congenital defects of the respiratory tract, tuberculosis, cystic fibrosis, asthma, allergic rhinitis, urticaria, anaphylactic shock, angioedema, 4) anaemia, bleeding diatheses, marrow failure, cancers in children, including solid tumours typical of childhood, 5) acute and chronic abdomen pain, vomiting, diarrhoea, constipations, alimentary canal bleedings, peptic ulcer disease, non-specific intestine diseases, pancreas diseases, cholestasis and liver diseases and other acquired diseases and congenial defects of the alimentary canal,

	6) urinary system infections, congenial defects of the urinary system, nephrotic syndrome, nephrolithiasis, acute and chronic renal failure, acute and chronic renal inflammations, systemic renal diseases, urination disorders, vesicoureteral reflux, 7) growth disturbances, thyroid and parathyroid diseases, adrenal gland diseases, diabetes, obesity, growing pains and disorders of sexual gland functions, 8) cerebral palsy, encephalitis and meningitis, epilepsy, 9) the most frequent infectious diseases in childhood, 10) genetic syndromes, 11) connective tissue diseases, rheumatic fever, juvenile arthritis, systemic lupus, dermatomyositis
E.W6	most common life-threatening conditions in children and rules of conduct in these states;
Skills– Graduate* is able to:	
E.U2	conduct a medical interview with the child and his or her family
E.U4	perform a physical examination of the child at any age
E.U7	assess the patient's general condition, state of consciousness and awareness
E.U9	compare anthropometric and blood pressure measurements with the data on the growth charts
E.U10	assess the stage of puberty
E.U11	Perform and understand developmental screenings
E.U12	perform a differential diagnosis of the most common diseases of adults and children
E.U13	assess and describe the patient's somatic and mental state
E.U14	recognize states of immediate danger to life
E.U27	Qualify the patient for vaccination;
E.U29	perform basic procedures and medical procedures: 1) body temperature measurement, pulse count and non-invasive blood pressure check, 2) vital signs monitoring with the aid of a pulse oximeter and cardiac monitor, 3) spirometry, oxygen therapy, manual ventilation and basics of mechanical ventilation, 4) oro- and nasopharyngeal airway device placement, 5) intravenous, intramuscular, subcutaneous injections, intravenous cannulation, venous blood sampling, blood culture taking, arterial and capillary blood sampling, 6) nasal, pharyngeal and skin swab taking, 7) male and female urinary bladder catheterisation, nasogastric tube placement, stomach lavage, enema, 8) standard resting electrocardiogram with adequate interpretation, electrical cardioversion and defibrillation, 9) simple strip test and blood glucose check
E.U38	keep patient's medical records

** In appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019 „graduate", not student is mentioned.*

5. ADDITIONAL EFFECTS OF LEARNING *(non-compulsory)*	
Number of effect of learning	**Effects in the fields of:**
Knowledge – Graduate knows and understands:	
K1	Legal regulations and basic methods for medical experimentation and conducting other medical research, including basic methods of data analysis
K2	the concept of medical error, the most common causes of medical errors and the principles of opinion in such cases
Skills– Graduate is able to:	
S1	collect information on the presence of risk factors for chronic diseases and plan preventive measures at different levels of prevention
S2	Act in a way to avoid medical errors
Social Competencies – Graduate is ready for:	
SC1	1) to establish and maintain deep and respectful contact with the patient, and to show understanding of world and cultural differences; 2) be guided by the patient's well-being; 3) respect the medical confidentiality and rights of the patient; 4) take action towards the patient on the basis of ethical principles, with awareness of the social conditions and limitations resulting from the disease, perceiving and recognizing their own limitations and making a self-assessment of deficits and educational needs; 6) promote pro-healthy behaviour; 7) use objective sources of information; 8) formulate conclusions from own measurements or observations; 9) implement the principles of professional camaraderie and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment; 10) formulating opinions concerning various aspects of professional activity; 11) assume responsibility for decisions taken in the course of professional activity, including in terms of own and other persons' safety.

6. CLASSES		
Form of class	**Class contents**	**Effects of Learning**
Seminar	1) physical and subjective paediatric investigation 2. psychomotor development 3 Feeding part 1 4 Nutrition part 2 5. evaluation of nutritional status 6. general state (state of consciousness, arrangement, body structure) 7 Skin, lymph nodes, head and neck examination 8 Basic symptoms and their differentiation in respiratory diseases (upper airways) 9 Basic symptoms and their differentiation in respiratory diseases (lower airways) 10 Basic symptoms and their differentiation in gastrointestinal diseases 11 Basic symptoms and their differentiation in urinary tract diseases 12 Basic symptoms and their differentiation in cardiovascular diseases	E.W1, E.W2, E.W3, E.W6, E.U2, E.U4, E.U7, E.U9, E.U10, E.U11, E.U12, E.U13, E.U14, E.U27, E.U29, E.U38, K1, K2, S1, S2, SC1

	13 Basic symptoms and their differentiation in nervous system diseases (including febrile convulsions) 14. protective vaccinations 15 Acute infectious diarrhea 16 Fever 17. meningitis 18 Upper respiratory tract infections 19 Characteristics of individual development periods and assessment methods 20 Colloquium Materials: https://pediatria.wum.edu.pl/	
Classes	Week 1. Monday - Physical examination - collecting interview with parent of young child, interview with older child. Tuesday - Physical examination - general condition, assessment of vital functions. Nutrition of children in the 1st year of life Wednesday - Physical examination - head, neck, skin. Child development. Milestones. Thursday - Physical examination - chest, respiratory system. Friday - Physical examination - abdominal cavity (digestive system, urinary system, features of sexual maturation). Week 2 Monday - Physical examination - chest, cardiovascular system Tuesday - Basics of neurological examination. Skeletal and articular system. Wednesday - Child with fever (septicemia, upper respiratory tract infection). Thursday - Child with fever (meningitis, gastroenteritis). Friday - Colloquium Additional topics: • child development • WHO centile grids • child nutrition in practice • oral and intravenous hydration in practice • vaccinations in practice • skin lesions (rashes)	E.W1, E.W2, E.W3, E.W6, E.U2, E.U4, E.U7, E.U9, E.U10, E.U11, E.U12, E.U13, E.U14, E.U27, E.U29, E.U38, K1, K2, S1, S2, SC1

7. LITERATURE

Obligatory

Obligatory literature:

1. Tom Lissauer, Will Carroll. Illustrated Textbook of Paediatrics, Elsevier. Fifth edition. (with. T. Lissauer, W.Carroll. Self-assessment in Paediatrics).
2. Karen J. Marcdante, Robert M. Kliegman: Nelson Essentials of Pediatrics. Elsevier, Eighth edition
3. Denis Gill, Niall O'Brien. Paediatric Clinical Examination- made easy. Elsevier, Sixth edition.
4. L.S. Bickley MD, Bates' Pocket Guide to Physical Examination & History Taking, Lippincott Williams & Wilkins,

Supplementary

http://szczepienia.pzh.gov.pl/en/immunization-schedule/ - Polish vaccination schedule

8. VERIFYING THE EFFECT OF LEARNING

Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion
E.W1, E.W2, E.W3, E.W6, E.U2, E.U4, E.U7, E.U9, E.U10, E.U11, E.U12, E.U13, E.U14, E.U27, E.U29, E.U38, K1, K2, S1, S2, SC1	*Credit for the exercises is given by the assistant on the basis of the student's participation in the exercises.* *Attendance of the student in all classes is mandatory; max. 1 day of excused absence (the form of homework must be agreed with the course coordinator). /three lateness (more than 15 minutes) to class are equivalent to one absence* *In the case of unexcused absences or more excused absences, the student must complete the entire block at a different date (to be agreed with the course coordinator).* *The coursework includes the completion of the exercises and the colloquium on the subject discussed during the class*	*Completion by assistant* *Written test (15 questions, minimum nine questions required)** **In the case of a negative assessment, the date of the correctional colloquium is agreed upon with the course coordinator within a maximum of 2 weeks from the end of the class.*

9. ADDITIONAL INFORMATION *(information essential for the course instructor that are not included in the other part of the course syllabus e.g. if the course is related to scientific research, detailed description of, information about the Science Club)*

During classes, students are required to have: a doctor's apron/scrubs, stethoscope, flashlight, badge, shift shoes and personal protective equipment. Please follow the rule of "nothing below the elbow " (no jewelry, watches or painted nails).

The student has the opportunity to evaluate the classes by filling in the university's evaluation questionnaire for classes and academic teachers. Additionally, students can submit their comments directly to the Clinic Secretariat. All suggestions for conducting classes will be considered with utmost care.

Students who are late to class for more than 15 minutes will not be allowed into the Department in the absence of a reasonable excuse

ATTENTION

The final 10 minutes of the last class in the block/semester/year should be allocated to students' Survey of Evaluation of Classes and Academic Teachers.

Nuclear Medicine

1. IMPRINT	
Academic Year	2025/2026
Department	Faculty of Medicine
Field of study	Medicine
Main scientific discipline	medical sciences
Study Profile	general academic
Level of studies	uniform MSc
Form of studies	Full time studies
Type of module / course	Obligatory
Form of verification of learning outcomes	Credit
Educational Unit / Educational Units	Department of Nuclear Medicine Warsaw Medical University, 1a Banacha Str., 02-097 Warsaw e-mail: sekretariat_zmn@wum.edu.pl tel. 22 599-22-70, fax: 22 599-11-70
Head of Educational Unit / Heads of Educational Units	Jolanta Kunikowska MD, PhD Prof.
Course coordinator	Konrad Giełdowski MD konrad.gieldowski@wum.edu.pl
Person responsible for syllabus	Konrad Giełdowski MD konrad.gieldowski@wum.edu.pl
Teachers	Jolanta Kunikowska MD, PhD Prof. Leszek Królicki MD, PhD Małgorzata Kobylecka MD, PhD Michał Kocemba MD Kacper Pełka MD Konrad Giełdowski MD Alain Iskandar MD Izabela Trojanowska Msc Monika Tulik PhD Paweł Halik PhD

	Szymon Kujda Msc

2. BASIC INFORMATION

Year and semester of studies	Year 3, Semesters 5 and 6 (winter and summer)	**Number of ECTS credits**	2.00

FORMS OF CLASSES **Contacting hours with academic teacher**	**Number of hours**	**ECTS credits calculation**
Lecture (L)		
Seminar (S)	7	0.28
Classes (C)	23	0.92
e-learning (e-L)		
Practical classes (PC)		
Work placement (WP)		
Unassisted student's work		
Preparation for classes and completions	20	0.80

3. COURSE OBJECTIVES

O	The aim of the education is to acquire the basics of diagnosis and treatment due to radiopharmaceuticals by the students: • physical fundamentals of radiation in nuclear medicine, principles of radiopharmaceutical, principles of instrumentation, principles of hybrid techniques • basic concepts in the field of radiobiology • clinical indications and basic principles of diagnostic (scintigraphy, SPECT/CT and PET/CT) procedures of: cardiovascular system, endocrine glands, gastrointestinal tract, genitourinary tract, bone, central nervous system, respiratory system • principles of treatment procedures (indications, contraindications, principles of qualification for treatment, management of the patient after isotopic therapy) of: benign and malignant thyroid diseases, joint diseases, bone palliation therapy, [^{131}I]mIBG, radiolabelled somatostatin analogues for neuroendocrine tumours, treatment in prostate cancer

4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING

Code and number of the effect of learning in accordance with standards of learning	**Effects in the field of:** *(in accordance with appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019)*

Knowledge – Graduate* knows and understands:	
F.W10	the issues surrounding the use of contemporary imaging examinations, in particular: 1) the radiological symptomatology of the principal diseases, 2) the instrumental methods and imaging techniques used to perform medical procedures, 3) the indications, contraindications and preparation of the patient for particular types of imaging examination and contraindications to the use of contrast agents;
E.W24	the basics of early cancer detection and principles of screening in oncology;
E.W29	principles of pain treatment, including neoplastic and chronic pain;
Skills– Graduate* is able to:	
B.U2	assess the harmfulness of the dose of ionising radiation and comply with radiological protection rules;
D.U3	choose treatment that minimises the social consequences for the patient;
D.U6	inform the patient of the aim, course and possible risks of the proposed diagnostic or therapeutic measures, and obtain the patient's informed consent for these measures;
E.U18	propose individualisation of existing therapeutic guidelines and other methods of treatment in the event of ineffectiveness or contraindications to standard therapy;

** In appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019 „graduate", not student is mentioned.*

5. ADDITIONAL EFFECTS OF LEARNING *(non-compulsory)*

Number of effect of learning	**Effects in the fields of:**
Knowledge – Graduate knows and understands:	
K1	the examinations performed in the Department of Nuclear Medicine: their theoretical principles, course, indications, possible complications
K2	the work organization of the nuclear medicine centre and the practical implementation of the principles of radiological protection
Skills– Graduate is able to:	
S1	select the appropriate examination for the patient on the basis of medical history, initial diagnosis and basic differential diagnosis
S2	assess the indications and write a referral for a radioisotope examination
Social Competencies – Graduate is ready for:	
SC1	respecting medical confidentiality and patient rights
SC2	establishing and maintaining a deep and respectful relationship with the patient

6. CLASSES

Form of class	**Class contents**	**Effects of Learning**
Seminar	1. Basic physics of Nuclear Medicine devices	F.W10, E.W24, E.W29

	• Physical basis of radiation in nuclear medicine, principles of instrumentation, principles of hybrid techniques. • Knowledge of the basics of measurement data processing and presentation of test results. • Theoretical and practical principles of radiological protection procedures. • Effects of radiation on living organisms. 2. Radiochemistry • Definition of radiopharmaceutical - its physical, chemical properties, • Construction of the generator, its types, • Biological effects of ionising radiation, • Basic knowledge of radiobiology. 3. Selected clinical applications of nuclear medicine diagnostic procedures • Examinations of the cardiovascular system, • Examinations of the endocrine glands, • Examinations of the gastrointestinal tract, • Examinations of the genitourinary tract, • Examinations of the bone and join system, • Examinations of the nervous system, • Examinations of the respiratory system, • Examinations applied in the diagnosis of cancer. 4. Therapy in Nuclear Medicine – principles of treatment procedures (indications, contraindications, principles of qualification for treatment, management of the patient after radionuclide therapy): • Treatment of benign and malignant thyroid diseases, • Treatment with [^{131}I]mIBG, • Treatment of joint diseases, • Treatment of pain symptoms in cancerous metastatic lesions to the skeletal system, • Treatment with radiolabelled somatostatin analogues for neuroendocrine tumours, • Treatment for prostate cancer, • Novel forms of therapy.	B.U2, D.U3, D.U6, E.U18 K1, K2 S1, S2 SC1, SC2
Class	Students become familiar with the organization of the facility. They learn about the patient's journey from the administration of the radioisotope to the examination, as well as how the examination is processed. Visit in the Nuclear Medicine Department. Examples of patient cases.	F.W10, E.W24, E.W29 B.U2, D.U3, D.U6, E.U18 K1, K2 S1, S2 SC1, SC2

7. LITERATURE

Obligatory

1. Peter J. Ell Sam Gambhir Nuclear Medicine in Clinical Diagnosis and Treatment, 2-Volume Set
2. European Association of Nuclear Medicine (EANM) guidelines
   https://www.eanm.org/publications/guidelines/
3. Download from AppStore free application of European Association of Nuclear Medicine (EANM)
   Clinical Decision Support
   European Nuclear Medicine Guide
4. IAEA Human Health Campus https://www.iaea.org/publications/10368/nuclear-medicine-physics

Supplementary

European Journal of Nuclear Medicine, Nuclear Medicine Review

8. VERIFYING THE EFFECT OF LEARNING

Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion
F.W10, E.W24, E.W29 B.U2, D.U3, D.U6, E.U18 K1, K2 S1, S2 SC1, SC2	Active attendance at all seminars and classes Any absences must be made up with another student group	100% attendance
	Oral credits.	60% of the correct answers

9. ADDITIONAL INFORMATION

Students are required to prepare for classes on the basis of the obligatory literature. Attendance and active participation in all seminars and classes is required. In case of absence, it is possible to make up the classes with another group. In exceptional cases, please contact the course coordinator. According to the study regulations you must make up any absences by the end of the semester. Making up missed classes at a later date requires the permission of the Dean.

All persons present in the Department of Nuclear Medicine are bound by both general health and safety regulations, as well as those specific to nuclear medicine - rules of radiation protection for staff and patients, rules of working in controlled and exclusion areas, and UCK WUM regulations. Entry to the controlled area is allowed only to students wearing hospital scrubs/coats and shoes for a change, after signing in the entry and exit book. Due to the potential possibility of radioactive contamination, outside footwear and outerwear and personal belongings should be left in the cloakroom. Any potential exposure to ionising radiation or damage to property in the supervised area should be reported immediately to the teacher or the Head of the Department.

All exercises should be performed strictly according to the instructions of the teachers. On the premises of the Department, students move only in the designated area and under the supervision of the instructor. During classes, please behave in a dignified and respectful manner, respect the intimacy of patients, respond to their needs, and do not be late. Arriving >15 minutes late is treated as an absence.

Pregnant students are requested to contact directly the Head of the Department (Prof. Jolanta Kunikowska, MD, PhD, email: jolanta.kunikowska@wum.edu.pl) min. 1 day before the scheduled date of classes.

At the end of the course an oral credits will be conducted. In case of failing, it is necessary to attend the credits with another group. In exceptional cases, please contact the course coordinator.

Didactic consultations with the course coordinator via e-mail.

Address of the Department of Nuclear Medicine: University Clinical Center of the Medical University of Warsaw, Banacha Str. 1a, block E, ground floor, 02-097 Warsaw.

ATTENTION

The final 10 minutes of the last class of the block/semester/year should be allotted for students to fill out the Survey of Evaluation of Classes and Academic Teachers

Propedeutics of Stomatology

1. IMPRINT	
Academic Year	2025/2026
Department	Faculty of Medicine
Field of study	Medicine
Main scientific discipline	Medical science
Study Profile	General academic
Level of studies	Uniform MSc
Form of studies	Full-time studies
Type of module / course	obligatory
Form of verification of learning outcomes	credit
Educational Unit / Educational Units	Department of Periodontology and Oral Diseases (WLS5), UCS University Dentistry Center at 6 Binieckiego St, 02-097 Warsaw e-mail: sluzowki@wum.edu.pl
Head of Educational Unit / Heads of Educational Units	Assoc. Prof. Jan Kowalski, MD PhD
Course coordinator	Dr n. med. Andrzej Miskiewicz; phone (22) 2701616, mobile 513445674, e-mail: andrzej.miskiewicz@wum.edu.pl

Person responsible for syllabus	Dr n. med. Andrzej Miskiewicz; phone (22) 2701616, mobile 513445674, e-mail: andrzej.miskiewicz@wum.edu.pl
Teachers	prof. Kazimierz Szopiński – dental radiology dr hab. n.med Ewa Czochrowska – orthodontics dr n.med. Anna Widmańska - orthodontics dr n.med Andrzej Miskiewicz – periodontology dr n.med. Zygmunt Stopa – maxillofacial surgery dr n.med. Iwona Sobiech – pediatric dentistry lek. stom Magdalena Świątkowska-Bury – pediatric dentistry

2. BASIC INFORMATION

Year and semester of studies	III year, 6-th semester	**Number of ECTS credits**	1.00

FORMS OF CLASSES **Contacting hours with academic teacher**	**Number of hours**	**ECTS credits calculation**
Lecture (L)	18	0.72
Seminar (S)	-	-
Classes (C)	-	-
e-learning (e-L)	-	-
Practical classes (PC)	-	-
Work placement (WP)	-	-
Unassisted student's work		
Preparation for classes and completions	7	0.28

3. COURSE OBJECTIVES

O1	Gaining basic knowledge about oral and maxillofacial conditions.
O2	Learning the principles of clinical and radiological diagnostics of oral cavity diseases.
O3	Getting acquainted in the interactions between oral medicine and systemic health.

4. **STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING** *(concerns fields of study regulated by the Regulation of Minister of Science and Higher Education from 26 of July 2019; does not apply to other fields of study)*	
Code and number of effect of learning in accordance with standards of learning	**Effects in time** *(in accordance with appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019)* **Knowledge of the masticatory system structure and function, the patomechanism of periodontal diseases. Knowledge of the prophylaxis in children and adolescents. Knowledge of the principles of dental trauma treatment.**
Knowledge – Graduate* knows and understands:	
G.K1	F.W1: causes, symptoms, principles of diagnosis and therapeutic treatment in relation to the most common diseases requiring surgical intervention taking into account the distinctions of childhood, in particular: bone fractures and organ injuries
G.K2	F.W13. causes, symptoms, principles of diagnosis and therapeutic treatment in the case of the most common diseases of the central nervous system in terms of: cranial-cerebral injuries,
G.K3	E.W3. causes, symptoms, principles of diagnosis and therapeutic treatment of the most common diseases in children: acute and chronic diseases of the upper and lower respiratory tract, congenital defects of the respiratory tract, tuberculosis, cystic fibrosis, asthma, allergic rhinitis, urticaria, anaphylactic shock, angioedema,
G.K4	E.W7. reasons, symptoms, diagnostic and treatment procedures of the most frequent internal diseases and their complications in adult patients: digestive system diseases, including oral cavity.
G.K5	E.W24. basics of early detection of tumours and oncology screening principles
Skills– Graduate* is able to:	
G.S1	E.U1. collect medical history from adult patients;
G.S2	E.U3. conduct a complete and targeted physical examination in adults;

** In appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019 „graduate", not student is mentioned.*

5. **ADDITIONAL EFFECTS OF LEARNING** *(non-compulsory)*	
Number of effect of learning	**Effects of learning in time** Knowledge of co-dependencies between periodontal disease and systemic health.
Knowledge – Graduate knows and understands:	
K1	G.W1. health assessment methods of an individual and a population, disease and medical procedure classification;
K2	E.W23. environmental and epidemiological conditions of the most common cancers;
Skills– Graduate is able to:	
S1	E.U1. collect medical history from adult patients;
S2	E.U3. conduct a complete and targeted physical examination in adults;

Social Competencies – Graduate is ready for:	
SC1	F.U1. assist in a typical surgery, prepare the surgical field and use local anaesthetics at the operated area;
SC2	F.U3. observe the rules of asepsis and antisepsis;

6. Classes

Form of class	Class contents	Effects of Learning
Lecture 1	The new approach in pediatric dentistry.	G.K1, O1, K1
Lecture 2	Dental trauma.	G.K1, G.K2
Lecture 3	Selected diseases of the oral cavity requiring surgical approach.	G.K5, G.K3, S1, S2
Lecture 4	Maxillofacial surgical treatment.	G.S1, SC1, SC2
Lecture 5	Orthodontic diagnosis.	G.S2, E.U3
Lecture 6	Orthodontic treatment.	G.K1
Lecture 7	Relationship between periodontal and systemic diseases.	G.K4, O2, S1
Lecture 8	Symptoms of systemic diseases and disorders in the oral cavity.	O3, K2
Lecture 9	Introduction to dentomaxillofacial radiology. Part I.	G.K1
Lecture 10	Introduction to dentomaxillofacial radiology. Part II.	G.K2

7. Literature

Obligatory

Periodontology: The Essentials. *Hans-Peter Mueller*; Georg Thieme 2015 Ed. II

Supplementary

Clinical Periodontology and Implant Dentistry. *Niklaus P. Lang* and *Jan Lindhe*; John Wiley & Sons 2015

8. Verifying the effect of learning

Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion
O1-O3	*Credit*	*Presence*
G.K1-G.K5	*Credit*	*Presence*
G.S1-G.S2	*Credit*	*Presence*
K1-K2	*Credit*	*Presence*
S1-S2	*Credit*	*Presence*

SC1-SC2	*Credit*	*Presence*

9. **ADDITIONAL INFORMATION** *(information essential for the course instructor that are not included in the other part of the course syllabus e.g. if the course is related to scientific research, detailed description of, information about the Science Club)*

Knowledge from the anatomy and physiology, confirmed with the passed curricula on the 1st and 2nd year. Crediting the propedeutics of stomatology is based on attendance at all lectures. Therefore, attendance at all lectures is necessary to obtain a credit for the course. It is not possible to repeat a given lecture, as it is held only once and only in the summer semester.

ATTENTION

The final 10 minutes of the last class in the block/semester/year should be allocated to students' Survey of Evaluation of Classes and Academic Teachers.

VOCATIONAL TRAINING

Internal Medicine – 4 weeks – 140h
3rd year, 6-year program ED students
Faculty of Medicine

The summer clinical clerkships are mandatory for students to be assigned a pass for the whole year's academic performance since they are an inherent part of the medical instruction provided throughout the year of study.

Upon completion of the third year students are required to have one-month clinical clerkships at a teaching hospital in Poland or selected foreign countries.

The curriculum of clinical clerkship comprises:

a four-week training in the internal medicine ward.

The head of the ward or an appointed assistant is responsible for providing a detailed program of the training and scheduled duties as well as supervision of students' clinical performance.

Students carry out the work which is that of a regular physician and are supervised by a physician in charge.

During the training students are obliged to have four twenty-four-hour shifts (two on each ward) when they accompany the doctor on duty while he/she performs all the necessary clinical activities and procedures.

The goal of the clinical instruction is to make a practical use of the knowledge acquired in the course of the study e.g., bacteriology, virology, pathomorphology, pathophysiology, pharmacology, and particularly of the clinical subjects i.e. introduction, to medicine and pediatrics.

The clinical instruction should include the following aspects:

- information about the organization of medical ward and their cooperation with the outpatients' department,
- further improvement in taking histories and performing physical examination,
- particularly concerned with assessment of patients' general condition and their psychology,
- planning and collecting specimens for accessory investigations and interpretation of
- the results,
- improving the skills in differentiating and diagnostic basic clinical entities, particularly
- acute cases, and principles of treatment,
- providing first aid,
- performing everyday clinical procedures (injections and intravenous infusions, catheterization, lumbar puncture, bone marrow puncture and paracentesis of the body cavities), participation in ward rounds and consultations by other specialists

Throughout the course of the training students are expected to make records of their activities and procedures performed. They are also assessed by the instructor in charge and are finally granted their passing mark by the head of the department. Certificates written in English or translated should be submitted to the Dean's Office of the Medical University of Warsaw by September 20th of the subsequent academic year.